Former Chamberlain Manufacturing Corporation

550 Esther Street

Waterloo lowa

EPA Docket Nos.

RCRA-07-2010-002

CERCLA-07-2010-0005

AUGUST 12,20(144)-5,2011

Terracon Project No. 07107020

Chamberlain Manufacturing Corporation
Elmhurst, Illinois

Prepared by: Terracon Consultants, Inc. Bettendorf, Iowa

Offices Nationwide Employee-Owned Established in 1965 terracon.com





July 5, 2011

United States Environmental Protection Agency Region 7 Air, RCRA and Toxics Division 901 North 5th Street Kansas City, KS 66101

Attention:

Mr. Bruce Morrison

Re:

Vapor Intrusion Characterization Report

Former Chamberlain Manufacturing Corporation

550 Esther Street Waterloo, Iowa

EPA Docket Nos. RCRA-07-2010-002 and CERCLA-07-2010-0005

Dear Mr. Morrison:

Terracon Consultants, Inc. (Terracon) is pleased to submit this revised Vapor Intrusion Characterization Report (VIC Report) for activities in conjunction with the site referenced above. The VIC Report presents results of activities related to the installation of sub-slab vapor sampling points and the collection and analysis of sub-slab vapor, indoor air, and ambient air samples.

Should you have any questions or require additional information, please do not hesitate to contact our office.

Sincerely,

Terracon Consultants, Inc.

John F. Brimeyer, PE

Environmental Manager

Mally Kuhn For John B. Sallman, PG

Principal



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ACRONYMS & ABBREVIATIONS

	nsive Environmental Response, Compensation, and Liability Act
	City of Waterloo
COC	
EPA	Environmental Protection Agency
HASP	Health and Safety Plan
	Method Detection Limit
μg/m ³	micrograms per cubic meter
NELAC	National Environmental Laboratory Accreditation Conference
PCE	
ppm	parts per million
Property	Chamberlain Manufacturing site
QA	
QAM	Quality Assurance Manual
	Quality Assurance Project Plan
QC	Quality Control
RCRA	Resource Conservation and Recovery Act
RPD	Relative Percent Difference
	Standard Operating Procedure
SOW	Statement of Work
TCE	Trichloroethene
	TestAmerica, Inc.
TSOP	Terracon Standard Operating Procedure
UAO	Unilateral Administrative Order
USEPA	United States Environmental Protection Agency
VIC	Vapor Intrusion Characterization
VIIM	
	Volatile Organic Compound



VAPOR INTRUSION CHARACTERIZATION REPORT FORMER CHAMBERLAIN MANUFACTURING CORPORATION 550 ESTHER STREET WATERLOO, IOWA

Project No. 07107020 July 5, 2011

1.0 INTRODUCTION

Terracon has prepared this VIC Report to evaluate the results of vapor intrusion characterization activities conducted in accordance with VIC Work Plan dated May 20, 2010 and revised October 14, 2010. The VIC Work Plan was approved with modifications by the USEPA on January 6, 2011¹. The intent of the VIC Work Plan was to evaluate the potential existence of a vapor pathway in off-site areas related to shallow groundwater contamination from the former Chamberlain Manufacturing facility. This VIC Report is submitted in accordance with the requirements of the UAO, Docket Nos. RCRA 07-2010-002 and CERCLA 07-2010-005 dated April 20, 2010 and Task I of the SOW attached to the UAO. Capitalized terms not defined herein have the definitions set for the in the UAO or the SOW.

The vapor intrusion characterization activities were completed in accordance with USEPA and other applicable guidance including, but not limited to:

- CalEPA (California Environmental Protection Agency). 2004. Guidance for the Evaluation and Mitigation of Subsuface Vapor Intrusion to Indoor Air. Interim Final. Department of Toxic Substances Control. Sacramento, CA. (Revised February 7, 2005) ("California Guidance")
- ITRC (The Interstate Technology & Regulatory Council). 2007. Vapor Intrusion Pathway: A Practical Guideline. Vapor Intrusion Team. Washington, DC. ("ITRC Guidance")
- U.S. EPA. 2002. Draft Guidance for Evaluating the Vapor Intrusion to Indoor Air Pathway
 From Groundwater and Soils (Subsurface Vapor Intrusion Guidance). Office of Solid
 Waste and Emergency Response, Washington, DC.
- U.S. EPA. 2008: US. EPA's Vapor Intrusion Database: Preliminary Evaluation of Attenuation Factors. Draft. Office of Solid Waste, Washington, DC.
- U.S. EPA "Development of a Sub-Slab Gas Sampling Protocol to Support Assessment of Vapor Intrusion." (http://www.epa.gov/ahaazvuc/research/waste/research 40.pdf.)

¹ We understand that the USEPA is currently considering amendments to the VIC Work Plan. The activities described in this VIC Report were completed prior to amendments incorporated after January 6, 2011.

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1.1 Site Conditions

The Property is an irregularly shaped parcel containing approximately 22.8 acres and located at 550 Esther Street in Waterloo, Iowa. A Topographic Map is included as Figure 1 in Appendix A. A Site Diagram is included as Figure 2.

Chamberlain Manufacturing produced metal washer wringers and projectile metal parts from approximately 1919 until 1996 when it was sold to Atlas Warehouse L.C. for use as a warehousing facility. The City acquired the Property from Atlas Warehouse L.C in 2005 in an effort to facilitate redevelopment and has demolished the buildings on the Property.

The Property is zoned Heavy Industrial (M-2) by the City. The Property is adjoined by park land to the north and south, single family residential housing to the west, and Virden Creek followed by a golf course to the east. Virden Creek is within approximately 100 feet of the Property at its closest point. Gates Park adjoins the Property to the north across Louise Street, to the east across Virden Creek, and to the south across the railroad tracks. Single family residences are located across East 4th Street to the west of the Property. Single family residences are also located along the east side of East 4th between Anita and Louise Streets.

1.2 Previous Assessment Activities

Beginning in 2004, the City conducted an environmental assessment of the site using a USEPA Brownfields Grant. Results of assessment activities identified impacts to soil and groundwater at the site including a chlorinated solvent plume that extends to the south and west. Site assessment activities were not completed due to funding restrictions of the Brownfields Grant program.

Subsequently, environmental assessment activities of onsite soil and groundwater conditions and the offsite chlorinated solvent plume were completed by Chamberlain. The lateral extent of the chlorinated solvent plume has been determined to extend south and west from the Property into an area of residential development. USEPA's preliminary evaluation of the vapor intrusion to indoor air pathway resulting from the groundwater plume identified the potential for vapor intrusion into residential structures.

To further evaluate the vapor intrusion pathway, the USEPA conducted sub-slab vapor sampling of selected residences in November 2008. Due to problems with the sampling and analysis equipment, the sampling activities were repeated in April/May 2009. Sub-slab vapor samples were collected from ten homes located along and near East 4th Street and analyzed for VOCs. In addition, one indoor air sample was collected from one of the ten homes. The results of sampling activities identified PCE and TCE in excess of sub-slab vapor screening levels in seven of the ten residences sampled. The elevated concentrations were generally located within the 2200, 2300, and 2400 blocks of East 4th Street.

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1.3 Project Objectives

The objective of the VIC Report is to evaluate the nature and extent of sub-slab soil gas impact in residential areas adjoining the Property to the south and west. Results of sub-slab vapor sampling will be used to evaluate the need for vapor intrusion interim measures and corrective actions.

2.0 SCOPE OF SERVICES

The VIC Report for the area south and west of the Property evaluates the potential vapor intrusion pathway. Activities included the installation of sub-slab vapor sampling ports and the collection of sub-slab vapor samples. In addition, indoor air samples and corresponding ambient air samples were collected at representative locations.

2.1 Study Area

Sub-slab soil gas sampling and analysis began with those homes within the limits identified in the SOW, Exhibit 2, included as Figure 3, Appendix A. The area identified includes approximately 72 Residences. The ten homes sampled by the USEPA in April/May 2009 are included in the study area and were offered the opportunity to be resampled for a consistent baseline.

2.2 Sampling Activities

2.2.1 Site Access

Prior to site mobilization, the names and addresses for those Residences within the limits identified on Figure 3 were obtained from a review of City of Waterloo directory and the Blackhawk County Real Estate Mapping website. Based on a review of the city directory and county website records, it was determined that 29 of the 72 Residences were rental properties. Each identified property owner and resident was sent a certified letter explaining the availability of the vapor sampling program, details concerning the procedures to be followed, schedule of proposed activities, and availability of results. A Sampling Request Form and a standard Terracon Access Agreement were included with the letters. Copies of the letter, Sampling Request Form, and Terracon Access Agreement for owner-occupied Residences and for renter-occupied Residences are included as Appendix C. A spreadsheet identifying the 72 Residences and the owners and occupants of each was provided to the USEPA on March 30, 2011. A copy of the spreadsheet is also included in Appendix C.

Terracon received responses from 21 owner-occupied Residences and 12 renter-occupied Residences. Each owner and renter submitting a response was contacted in an attempt to

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schedule site visits for vapor characterization activities or to obtain fully completed Sampling Request Forms and Access Agreements from both the property owner and the renter. Sampling activities were completed at 17 owner-occupied Residences and 6 renter-occupied Residences. Sampling activities were not completed at responding Residences due to the following reasons:

- Fully completed Sampling Request Forms and Access Agreements not received from both the property owner and the renter (4 renter-occupied Residences)
- Residence was withdrawn from the program either voluntarily or due to conditional requests (2 owner-occupied Residences and 1 renter-occupied Residence)
- Occupants could not be reached to schedule sampling activities (2 owner-occupied Residences)
- Occupants were not available at the scheduled sampling time (1 renter-occupied Residence)

2.2.2 Sampling Questionnaire and Site Observations

Upon arrival at the Residence, Terracon conducted an interview with the occupant to allow for completion of the Occupied Dwelling Questionnaire, intended to document the presence/absence and use of household products containing VOCs. Observations were made to document the location of features including, but not limited to furnaces, water heaters, chimneys, and floor drains and the physical characteristics of the home being sampled including, but not limited to the type of foundation and its integrity.

An Arrival Checklist was completed by Terracon and signed by the occupant following each visit to the Residence. The purpose of the Arrival Checklist was to document proper completion of procedural activities including presentation of Terracon identification, confirmation of occupant's identity, explanation of purpose of the site visit, and discussion of follow-up activities.

2.2.3 Sub-slab Soil Gas, Indoor Air, and Ambient Air Sampling

Sub-slab soil gas sampling was conducted at each of the 23 Residences included in the sampling program. Indoor air sampling and ambient air sampling were conducted at randomly selected Residences included in the sampling program and at each of the Residences included in the sampling program in which the detected concentration of TCE or PCE exceeded the screening level in the April/May 2009 sampling event. Duplicate sample locations were also collected.

Terracon sampling teams arrived at the Residences at the appointed time. After introductions, one member of the sampling team completed the Occupied Dwelling Questionnaire with the occupant. The remaining member of the sampling team proceeded with the installation of the sub-slab sampling port. A Sampling Port Installation Checklist was completed by Terracon and signed by the occupant following completion of sample port installation. The purpose of the Sampling Port Installation Checklist was to document proper completion of procedural activities.

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including identification of sample port location with the concurrence of the occupant, sample port installation in accordance with VIC Work Plan procedures, clean-up of work area, and observation of completed port installation by occupant.

After allowing the sub-slab sampling port to cure for at least 48-hours, Terracon returned to the Residence to conduct sampling activities. If the Residence was not scheduled for indoor air sampling, sub-slab soil gas sampling was completed. If the Residence was scheduled for indoor air sampling, indoor air sampling equipment was placed in the designated sampling location and sampling was initiated and a follow-up site visit was scheduled for the following day. After allowing indoor air sampling to proceed for at least 24-hours, Terracon returned to the Residence to collect indoor air sampling equipment and to complete sub-slab soil gas sampling. Ambient air sampling, if scheduled, was conducted concurrently with indoor air sampling to document outdoor levels of VOCs during sampling activities.

An Indoor Air Sampling Canister Installation Checklist was completed by Terracon and signed by the occupant following completion of canister placement. The purpose of the Indoor Air Sampling Canister Installation Checklist was to document proper completion of procedural activities including verification that doors and windows had not been opened for a 24-hour period prior to sampling, identification of sample canister placement with the concurrence of the occupant, explanation of precautions to be taken during sample collection, and arranging for the follow-up visit.

Meteorological conditions were documented during sampling activities.

Copies of the completed Occupied Dwelling Questionnaire are included as Appendix D. Copies of completed field forms including the Soil Vapor/Indoor Air Sampling Information Form and field checklists are included as Appendix E.

2.3 Health and Safety

Terracon prepared a HASP for the sampling activities. Personnel installing sampling ports wore a USEPA Level D work uniform consisting of safety glasses and protective gloves.

2.4 Site Access Protocol

Terracon notified the Occupants at least 48 hours in advance of the start of assessment activities. City staff were notified of pending activities to give them an opportunity to prepare for possible inquiries from residents and to observe sampling activities. Issues regarding access to assessment locations were not encountered during sampling activities.

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3.0 METHODOLOGIES

Project activities were completed in accordance with the USEPA-approved QAPP, Revision 1 dated August 18, 2006, QAPP Addendum dated August 2, 2010, and relevant TSOPs. The following TSOPs were used during the assessment.

Table 3-1 Terracon Standard Operating Procedures

REFERENCE NO.	TITLE OF PROCEDURE	
E.10	Project Mobilization	
E.20	Standard Safe Operating Procedures for Hazardous Waste Operations	
E.30	Chain of Custody Documentation	
E.50	Sampling – Environmental Representativeness	
E.554	Field Screening – Air / Photoionization Detector	
E.2210	General	
E.2220	Disposal of Spent Supplies	
E.2230	Handling and Storage of Drill Cuttings (Non-Hazardous)	
E.2240	Site Security Procedures	
E.2405	Cleaning - General	
E.2410	Cleaning - Manual Washing	

As described in Section 1.5.3 of the QAPP, specific work scopes may require variation of TSOP procedures following relevant state and federal guidance, technical standards, or manufacturer specifications not outlined under a specific TSOP. Accordingly, the following non-TSOPs were incorporated into the VIC Work Plan and were used as a part of characterization activities.

3.1 Sampling Port Installation

Sub-slab soil gas samples were collected via a hollow steel sleeve installed through the concrete floor slab. The sub-slab inserts were constructed from a 1-inch outer diameter by 4-inches long cylindrical blank. The steel blanks were hollowed out to allow for the passage of sub-slab soil gas from beneath the floor slab into the sampling apparatus. The top of the sub-slab insert consisted of a threaded set-screw style cap and rubber O-ring that allows for a flush mounted installation and sealing of insert. Sub-slab inserts also had a one-eighth inch diameter rod welded vertically on their exterior to prevent the insert from spinning loose after the installation process.

Upon arrival at the Residence, Terracon observed the basement area to identify a location for installation of the sampling port. Terracon attempted to identify an unobtrusive location in an interior portion of the basement that was not near possible migration pathways such as floor drains, separated floor cracks, unsealed pipe penetrations, or sump pump pits. Pertinent observations were documented on a Soil Vapor/Indoor Air Sampling Information Form and photographs of the port location, before and after installation, were taken. Photographs of installed sample ports are provided in Appendix F.

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Sub-slab inserts were thoroughly cleaned before installation to remove any residues and contaminants left over from the fabrication processes. The inserts were installed in holes drilled through the concrete floor slab using a 1½-inch diameter carbide masonry bit and a rotary hammer drill. The hole was advanced completely through the concrete floor slab. Silica sand was used to backfill the hole and obtain the proper level for the insert to be flush mounted. A small piece of wire mesh screen was placed between the silica sand and insert to prevent silica sand from entering the insert interior. Additional silica sand was placed around the insert to stabilize the insert in the hole for the remaining installation process. The remaining annular space around the insert was filled to the concrete surface using neat Portland cement. The Portland cement was mixed with water until a paste consistency was obtained. The Portland cement was then placed into the annular space and finished as a flush mounted unit.

The sampling port installation was completed in accordance with the USEPA-approved QAPP Addendum dated August 2, 2010 and consistent with the USEPA guidance.

3.2 Sub-Slab Vapor Sampling

Sub-slab vapor sampling was conducted in accordance with the ITRC Guidance. The set screw of the flush mounted insert was removed using an Allen wrench. A threaded nipple with Teflon tubing was screwed into the flush mounted sub-slab insert. A syringe was connected to the Teflon tubing and used to purge approximately two volumes of soil gas from the sub-slab soil gas sampling point.

The sample was collected by attaching the top end of the tubing to a six-liter Summa canister equipped with a 200 cubic centimeter per minute flow control and vacuum gauge. The vacuum in the Summa canister before and after sampling was recorded on the information form. The valve of the Summa canister was opened and the sub-slab soil gas allowed to flow into the Summa canister for a period of 30-minutes. The vacuum gauge was monitored to check progress of the canister filling. The Summa canister valve was then closed and the Summa canister was submitted for laboratory analysis. Sample collection was completed prior to the full dissipation of vacuum on the summa canisters.

Based on a review of port installation and sampling procedures, it was determined in the field that excessive moisture or dust was not anticipated during sampling activities. As such, an in-line paper filter/moisture trap was not used.

After the soil gas sample was collected, a photo-ionization detector was connected to the tubing to measure the organic vapor concentration. A Soil Vapor/Indoor Air Sampling Information Form indicating project information, equipment identifiers, sample location, sample time, etc. was completed for each soil gas sample. A COC was also filled out indicating the sample identification, sampling time, equipment identifiers, and soil organic vapor reading. The canisters were then transported to the laboratory.

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Sub-slab vapor samples were collected from each Residence that granted access, responded to Terracon's request to schedule sampling activities, and was available at the scheduled time within the limits of the area identified.

3.3 Indoor Air Sampling

Indoor air sampling was conducted in accordance with the ITRC Guidance. Indoor air samples were collected using laboratory prepared six-liter Summa canisters and flow controllers. The flow controllers were pre-set by the laboratory to collect samples over a 24-hour period. Terracon requested that occupants close doors and windows and operate the heating, ventilating, and air conditioning (HVAC) system for the period beginning 24-hours prior to the start of sample collection to the end of sample collection.

In accordance with the USEPA approval letter dated January 6, 2011, indoor air sampling was conducted in the basement and in the lowest occupied living area of each Residence. For Residences with finished family rooms and/or bedrooms in the basement, the basement was determined to be the lowest occupied level. Upon arrival at the Residence, Terracon observed the basement and first floor areas to determine the number of samples required, per the USEPA approval letter, and the sample locations. Terracon attempted to identify unobtrusive locations in interior portions of the basement and first floor that were not near possible migration pathways such as exterior doors or windows, floor drains, separated floor cracks, unsealed pipe penetrations, or sump pump pits. Pertinent observations were documented on a Soil Vapor/Indoor Air Sampling Information Form and photographs of the sample location were taken.

Terracon field personnel connected the flow controller to the Summa canister by removing the brass cap on the canister and tightening the stainless steel Swagelock fitting on the flow controller to the threads on the canister. A wrench was used to firmly tighten the fitting.

Once sampling locations were selected, Terracon air sampling forms (project information, equipment identifiers, sample location, and start time) were filled out and attached to the canisters. A Soil Vapor/Indoor Air Sampling Information Form indicating project information, equipment identifiers, sample location, sample time, initial and final vacuum readings, etc. was completed for each indoor air sample. A COC was completed indicating the start time for the samples.

To open the canister, the valve was rotated counter-clockwise at least one full turn or otherwise opened. After the 24-hours, Terracon personnel returned to the Residence, closed the valve on the canister and recorded the time and vacuum remaining in the Summa canister on the Terracon sampling forms and on the COC. The canisters and flow controllers were then transported to the laboratory.

Indoor air sampling was conducted in one Residence for every ten Residences at which sub-slab vapor samples collected from those Residences granting access. Residences identified for indoor

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air sampling were randomly determined using the Random function of Microsoft Excel®, except that efforts were made to uniformly distribute selected locations across the study area. If application of the Random function resulted in multiple indoor air samples distributed across a small portion of the study area, the Random function was reran to produce a more uniform distribution across the entire area.

Indoor air sampling was also conducted at those Residences included in the sampling program in which the detected concentration of TCE or PCE exceeded the screening level in the April/May 2009 sampling event. The Residences selected for resampling were in addition to the one Residence for every 10 homes as noted previously.

3.4 Ambient Air

Ambient (outdoor) air samples were collected simultaneously with the indoor air samples over a 24-hour period. The sample locations for ambient air sampling were randomly determined from the group of indoor air sample locations using the Random function of Microsoft Excel®. Ambient air samples were not collected near buildings or large trees. Following set-up of indoor air samples, Terracon observed exterior areas at the Residence to identify locations for collecting the ambient air sample.

A Soil Vapor/Indoor Air Sampling Information Form indicating project information, equipment identifiers, sample location, sample time, initial and final vacuum readings, etc. was completed for each ambient air sample. A COC was completed indicating the start time for the samples.

The samples were collected using individually-certified 6-liter Summa canisters with 24-hour flow controllers. Once a sampling location was selected, a Terracon air sampling form (project information, equipment identifiers, sample location, and start time) was filled out and attached to the canister. The inlet to the flow controllers were positioned between 3 and 5 feet above the ground surface. Raincaps were positioned over the canisters and flow controller inlets to protect them from weather conditions and the canisters were secured in place.

To open the canister, the valve was rotated counter-clockwise at least one full turn or otherwise opened. After 24 hours, Terracon personnel returned to the Residence, closed the valve on the canister and recorded the time and vacuum remaining in the Summa canister on the Terracon sampling forms and on the COC. The canisters and flow controllers were then transported to the laboratory.

Three ambient air samples were collected in conjunction with sub-slab vapor and indoor air sampling activities.

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4.0 ANALYTICAL RESULTS

Sub-slab vapor, indoor air, and ambient air samples were collected using six-liter Summa canisters. The Summa canisters were submitted for analysis of PCE, TCE, vinyl chloride, trans-1,2-dichloroethene (trans-DCE), cis-1,2-dichloroethene (cis-DCE), 1,1-dichloroethene, 1,1-dichloroethene, 1,1-trichloroethane (TCA), and 1,1,2-trichloroethane, using EPA Method TO-15.

Laboratory procedures were performed by TestAmerica, Knoxville, Tennessee. TestAmerica is NELAC accredited for the laboratory methods referenced above. The laboratory QAM is on file with the USEPA. A copy of the SOPs for the specified method was included as Appendix F of the VIC Work Plan. The TestAmerica data is reported in accordance with the QAM and SOP. Copies of the laboratory analytical reports are included in Appendix G

4.1 Field Screening

Terracon conducted field screening of sub-slab soil gas and ambient air in conjunction with sub-slab soil gas sampling using a PID. This device provides a direct reading in ppm. The PID is a nonspecific total vapor detector and cannot be used to identify unknown substances; it can only roughly quantify for total volatiles present in the air. Terracon gas-calibrated the PID in accordance with the manufacturer's recommendations before the field activities. After connecting the Summa canister to the sub-slab sample port and allowing the instrument to stabilize, Terracon screened the ambient air in the basement using the PID equipped with a 10.2 eV ultraviolet lamp source. Following completion of sub-slab sampling, Terracon disconnected the Summa canister from the sample tubing and connected the PID to screen sub-slab soil gas for organic vapors. The field screening results for each sub-slab sample are included on the Soil Vapor/Indoor Air Sampling Information Form and are summarized on Table 1, Appendix B.

4.2 Laboratory Analysis

4.2.1 Screening Levels

Table 1A1 of the Statement of Work from the Unilateral Administrative Order for the Chamberlain Manufacturing Site (Docket No. RCRA-07-2010-002 and CERCLA-07-2010-005) identifies applicable screening levels for comparison of sub-slab and analytical results. These screening levels are presented in Table 4-1 below.

Table 4-1 Interim Measures Screening Levels

Contaminant	Indoor Air Screening Level (µg/m³) ¹	Sub-Slab Vapor Screening Level (μg/m³)²	Analytical Detection Limit (μg/m³)
Perchloroethene	0.41 c ³	4.1	0.540
Trichloroethene	1.2 c	12	0.215

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Contaminant	Indoor Air Screening Level (µg/m³)¹	Sub-Slab Vapor Screening Level (μg/m³)²	Analytical Detection Limit (µg/m³)
Vinyl Chloride	0.16	1.6	0.204
Trans-1,2-Dichloroethene	63 n⁴	630	0.317
Cis-1,2-Dichloroethene ⁵	63 n	630	0.317
1,1-Dichloroethene	210 n	2,100	0.317
1,1-Dichloroethane	1.5 c	15	0.324
1,1,1-Trichloroethane	5,200 n	52,000	0.436
1,1,2-Trichloroethane	0.15 c	1.5	0.360

T - Residential Indoor Screening Levels obtained from Regional Screening Table (USEPA 2009).

4.2.2 Laboratory Reporting Limits and Non-Detect Values

Laboratory technology cannot detect to concentrations of zero. As acknowledged by the USEPA, analytical methods dictate Analytical Detection Limits as the lower limit to which the procedures can accurately and repeatedly "see" a designated compound. The Analytical Detection Limit is a minimum concentration of a substance that can be measured and reported with 99% confidence that the compound concentration is greater than zero. The Analytical Detection Limit is determined from analysis within the given matrix of the sample and affected by matrix materials and/or other compounds within the matrix. The Indoor Air Screening Level for PCE, 1,1,2-trichloroethane, and vinyl chloride are less than the Analytical Detection Limit for these compounds. The USEPA has approved the use of the Analytical Detection Limit as the screening level for this site due to the technical inability to accurately quantify the detection of these compounds at the current USEPA screening level.

4.3 Sampling Program

Terracon collected sub-slab soil gas, indoor air, and ambient air samples for laboratory analysis in accordance with procedures established in the VIC Work Plan. Residences included in the sampling program are identified on Figure 3, Appendix A. Table 4-2 summarizes the sampling and analysis completed for each Residence.

Table 4-2 Summary of Sampling Program

Property ID	Address	Sub-Slab Soil Gas	Indoor Air	Ambient Air
4	322 E. Arlington St.	x	х	x
6	401 E. Arlington St.	Х		

² – Sub-slab vapor screening level = (Residential Indoor Screening Levels)/a.

 ³ - c - based on 10⁻⁶ carcinogenic health effects.
 ⁴ - n - based on non-carcinogenic health effects.

⁵- Trans-1,2-Dichloroethene is used as a surrogate compound for cis-1,2-Dichloroethene.

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Property ID	Address	Sub-Slab Soil Gas	Indoor Air	Ambient Air
10	211 Boston Ave.	х		
13	216 Boston Ave.	X		
15	223 Boston Ave.	X		
17	227 Boston Ave.	Х		
20	236 Boston Ave.	X		
21	239 Boston Ave.	Х		
22	240 Boston Ave.	Х		
28	302 Boston Ave.	х		
33	326 Boston Ave.	X	Х	
37	2221 E. 4th St.	Х		
38	2227 E. 4th St.	X	X	
39	2233 E. 4th St.	X		
40	2237 E. 4th St.	X	X	X
45	2413 E. 4th St.	Х	Х	
46	2417 E. 4th St.	X	Х	х
47	2421 E. 4th St.	X		
48	2427 E. 4th St.	X	Х	
56	2600 E. 4th St.	X		
60	2614 E. 4th St.	Х		
62	2620 E. 4th St.	X		
67	2635 E. 4th St.	Х		
72	2646 E. 4th St.	Not completed	Not completed	

T - Sample port installation was completed; however, occupant was not available to complete sampling.

4.4 Analytical Results

4.4.1 Sub-Slab Soil Gas Sampling

Sub-slab soil gas samples were collected in 23 Residences. The reported concentrations of PCE and TCE exceeded the sub-slab screening level in samples collected from eight of the Residences. The reported concentration of PCE exceeded the sub-slab screening level in samples collected from three additional Residences. The maximum reported PCE and TCE concentrations were 140 μ g/m³ and 6,000 μ g/m³, respectively.

The reported concentrations of the remaining contaminants of concern did not exceed sub-slab screening levels in the 11 Residences exhibiting PCE or TCE exceedences. The reported concentrations of the contaminants of concern did not exceed sub-slab screening levels in the remaining 12 Residences.

The screening levels are based on a health risk of 10⁻⁶ for carcinogenic compounds and a hazard quotient of 1 for non-carcinogenic compounds. Dividing the reported concentration of a

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compound by the screening level and multiplying by 10⁻⁶ results in a health risk for that compound. The reported concentration of TCE in sub-slab samples collected at 322 East Arlington, 302 Boston Avenue, and 2413 East 4th Street resulted in a health risk of greater than 10⁻⁴. The reported concentration of PCE in sub-slab samples collected at these three Residences resulted in a health risk of greater than 10⁻⁶ but less than 10⁻⁴. The reported concentration of PCE and/or TCE in sub-slab samples collected at 236 Boston Avenue, 240 Boston Avenue, 326 Boston Avenue, 2221 East 4th Street, 2227 East 4th Street, 2237 East 4th Street, 2417 East 4th Street, and 2427 East 4th Street resulted in a health risk of greater than 10⁻⁶ but less than 10⁻⁴. Health risk calculations are summarized in Table 4-3.

Table 4-3 Health Risk Summary

Residence	PCE Concentration (μg/m³)	Health Risk	TCE Concentration (μg/m³)	Health Risk
322 E. Arlington St.	41	1.00E-05	1300	1.08E-04
236 Boston Ave.	4.5	1.10E-06	8.3	6.92E-07
240 Boston Ave.	13	3.17E-06	25	2.08E-06
302 Boston Ave.	120	2.93E-05	6000	5.00E-04
326 Boston Ave.	11	2.68E-06	61	5.08E-06
2221 E. 4th St.	28	6.83E-06	3.3	2.75E-07
2227 E. 4th St.	140	3.41E-05	0.08	6.67E-09
2237 E. 4th St.	13	3.17E-06	99	8.25E-06
2413 E. 4th St.	36	8.78E-06	5700	4.75E-04
2417 E. 4th St.	29	7.07E-06	1100	9.17E-05
2427 E. 4th St.	15	3.66E-06	89	7.42E-06
Sub-Slab Screening Level	4.1	- 2	12	

Results of sub-slab soil gas sampling are depicted on Figure 4, Appendix A. Analytical results are presented in Table 1, Appendix B. Copies of laboratory analytical reports are provided in Appendix G.

4.4.2 Indoor Air Sampling

Indoor air samples were collected in seven Residences including two Residences based on 10% of sub-slab sampling and five Residences based on previous screening level exceedances. The reported concentrations of PCE exceeded the indoor air screening level in samples collected from three of the Residences and the reported concentration of TCE exceeded the sub-slab screening level in samples collected from one of the Residences. The maximum reported PCE and TCE concentrations were 2.5 $\mu g/m^3$ and 2.1 $\mu g/m^3$, respectively.

The reported concentrations of the remaining contaminants of concern did not exceed indoor air screening levels in these four Residences. The reported concentrations of the each contaminant of concern did not exceed sub-slab screening levels in the remaining three Residences.

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Results of indoor air sampling are depicted on Figure 4, Appendix A. Analytical results are presented in Table 2, Appendix B. Copies of laboratory analytical reports are provided in Appendix G.

4.4.3 Ambient Air Sampling

Ambient air samples were collected at three Residences. PCE and TCE were detected in one of the samples collected at concentrations of 0.19 $\mu g/m^3$ and 0.088 $\mu g/m^3$, respectively. The reported concentrations of PCE and TCE in this sample were J-flagged indicating that the results were greater than the MDL, but lower than the laboratory reporting limit. As a result, the reported concentrations were estimated. PCE and TCE were not detected in the remaining samples collected. The remaining contaminants of concern were not detected in the samples collected.

Analytical results are presented in Table 3, Appendix B. Copies of laboratory analytical reports are provided in Appendix G.

4.5 Comparison to Interim Measures Decision Matrix

A summary of analytical results compared to screening levels is provided in Table 1 and Table 2 of Appendix B. A summary of sampling results compared to Table 2-1 of the Vapor Intrusion Interim Measures Work Plan dated October 14, 2010 and approved by the USEPA on January 6, 2010 is presented in Table 4-4 below.

Table 4-4 Interim Measures Decision Matrix

		Indoor Air Concentrations (μg/m³)		
Generic Screening Levels		<pre><indoor air="" level<="" pre="" screening=""></indoor></pre>	No Indoor Air Sample	>Indoor Air Screening Level
Gas ug/m³)	< Sub-Slab Vapor Screening Level Risk ≤ 10 ⁻⁶ and Hazard Quotient ≤ 1	0	12	0
Sub-Slab Soil Gas oncentration (μg/m³)	> Sub-Slab Vapor Screening Level 10 ⁻⁶ < Risk < 10 ⁻⁴ and Hazard Quotient > 1	2	4	3
Sub-	> Sub-Slab Vapor Screening Level Risk > 10 ⁻⁴ or Hazard Quotient > 1	1	0	1

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5.0 QUALITY ASSURANCE/QUALITY CONTROL

5.1 Field Documentation

Sample quality assurance and quality control was maintained during the collection of samples in the field and during transport to the laboratory as documented through the completion of field forms and COCs. The transfer of sample custody was limited between Terracon personnel, laboratory couriers, and fixed base laboratory personnel. The primary objective of custody requirements for this project was to track that samples were handled by authorized personnel and document that handling occurred within the parameters of the approved VIC Work Plan.

Following collection, samples were maintained in the custody of the field team at the site until they were delivered to the TestAmerica laboratory in Cedar Falls, Iowa at the end of each day. The samples were received at the laboratory and logged in accordance with standard laboratory protocols. Analysis of the samples was completed by the TestAmerica laboratory in Knoxville, Tennessee. Samples were transferred by overnight courier from Cedar Falls to Knoxville under standard laboratory and COC procedures. COC documentation is maintained by Terracon.

COC protocols were followed during each phase of the sample collection, storage, shipment, and analysis procedures. Maintaining the COC in the field was the responsibility of the Terracon project professional. COCs were completed for each sample immediately following completion of sample collection and before removing the samples from the Residence.

Samples collected in the field were labeled and then stored in secure locations from the time of collection through transfer to the fixed base laboratory. Soil gas and air samples were collected using laboratory prepared Summa canisters and were kept at ambient temperature. In accordance with the QAPP, samples were not required to be preserved.

Soil gas and air samples were submitted for analysis of select VOCs by EPA Method TO-15. Terracon has reviewed analytical reports and has confirmed that each sample was analyzed within the designated 14-day holding time.

A COC record accompanied each set of samples during collection and shipment. Each COC record was filled out and signed in permanent ink by a Terracon field team member conducting the sampling. The COC records include the following information: project name and number, sample designation, date and time of collection, samplers name, number of sample containers, type of matrix, analysis to be performed, signature of laboratory person(s) receiving samples, and inclusive dates / times of possession. A carbon copy or photocopy was made of the COC record at the time of delivery to the laboratory.

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5.2 QA/QC Sampling

In accordance with the VIC Work Plan, duplicate samples and equipment blanks were used to monitor the quality assurance and control of the field sampling activities. The duplicate samples and equipment blanks were analyzed for VOCs. As required, at least one duplicate sample was collected per each 20 sub-slab vapor samples, each 20 indoor air samples, and each 20 ambient air samples. In addition, one equipment blank was required per 20 samples collected. A summary of QA/QC samples collected is provided in Table 5-1.

Table 5-1 QA/QC Samples

Sample Type	No. of Samples	QA/QC Type	No. of QA/QC Samples
Sub-Slab	23	Duplicate	3
Indoor Air	14	Duplicate	1
Ambient Air	3	Duplicate	1
Total Samples	40	Equipment Blank	3

5.3 Quality Control Parameters

To assess whether quality assurance objectives for this project have been achieved, the following QC parameters were considered: precision, accuracy, representativeness, comparability, completeness, and sensitivity.

5.3.1 Precision and Accuracy

As described in the QAPP, precision is evaluated using the RPD between an actual sample and a duplicate sample. Accuracy is evaluated using a percent recovery measured in spiked and unspiked samples. Accuracy is a function of the laboratory method, and parameters regarding accuracy are included in the lab report provided by the laboratory.

Duplicate samples were collected for samples SS-17, SS-38, SS-67, IA-48, and AA-40. For each compound that was detected in both samples (e.g., SS-17 and its duplicate SSD-17), Terracon compared the reported concentrations. The absolute values of the RPDs for air generally ranged from 7.4% to 38.1%; however the RPD for TCE in samples SS-38 and SSD-38 was 146.7%. Generally, an RPD of less than 50% for air samples is considered acceptable. Regarding the elevated RPD between SS-38 and SSD-38, Terracon notes that the reported TCE concentrations were 0.08 μ g/m³ and 0.52 μ g/m³, respectively. The MDL for TCE is reported as 0.075 μ g/m³. At relatively low concentrations, such as those reported for TCE in samples SS-38 and SSD-38, variations in reported sample and duplicate sample concentrations can significantly impact the RPD. Terracon has evaluated the effects of the elevated RPD and does not consider it to be indicative of a data failure, particularly considering that the RPD for PCE and 1,1,1-trichloroethane were determined to be 8.0% or less in the same samples.

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Laboratory accuracy controls were documented in accordance with the laboratory's internal QA Manual. The laboratory followed USEPA procedures.

5.3.2 Representativeness

Terracon has evaluated the representativeness of the VIC activities to document the degree to which the sample data accurately and precisely represents a characteristic of a population, parameter variations at a sampling point, or an environmental condition. Review of field methods and procedures indicated that sample collection, handling, and transportation were conducted in accordance with the QAPP and VIC Work Plan. Review of analytical results indicates that the analytical data is generally uniform and consistent between sampling points and with previous sampling and analysis activities.

5.3.3 Completeness

Laboratory analysis was completed on each of the samples collected in the field and submitted for analysis. Laboratory completeness was determined to be 100%.

5.3.4 Comparability

To produce comparable data, the units specified for analytical results obtained during the field activities are consistent throughout this project and standardized analytical methods have been used for each parameter.

5.3.5 Sensitivity

The Analytical Detection Limits were not sufficient to report concentrations below the indoor air screening levels for PCE, 1,1,2-trichloroethane, and vinyl chloride. For this reason, the USEPA has approved the use of the Analytical Detection Limit as the screening level for this site.

6.0 RECOMMENDATIONS

Terracon has evaluated the results of the sampling activities in consideration of the USEPAapproved screening levels. Based on a comparison of reported sub-slab and indoor air results to their respective screening levels, supplemental actions and interim measures have been identified, consistent with the VIIM Work Plan and subject to USEPA's review and approval. Proposed actions are depicted on Figure 5, Appendix A. Follow-up activities include the following:

 No Action – Sub-slab concentrations and indoor air concentrations are less than screening levels.

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- Monitor Sub-slab concentrations are greater than screening levels and indoor air concentrations are less than screening levels
- Conduct Indoor Air Sampling Sub-slab concentrations are greater than screening levels and indoor air samples were not collected
- Install Mitigation Systems Sub-slab concentrations and indoor air concentrations are greater than screening levels.

6.1 No Action

The reported concentrations of sub-slab samples in 12 Residences are less than the sub-slab screening level and indoor air samples were not collected. Comparison of sub-slab sample results to indoor air sample results in Residences where both were collected demonstrates that the actual attenuation factor is on the order of 100, significantly larger than the anticipated attenuation factor of 10. Further sampling and analysis and implementation of interim measures is not warranted.

Terracon will return to these 12 residences no earlier than July 20, 2011 to remove the sub-slab sampling ports. Using hand tools, Terracon will loosen the neat Portland cement placed in the annulus of the hole to allow for removal of the insert. After removal, the hole will be augered out using a 1½-inch diameter carbide masonry bit and a rotary hammer drill. The hole will be filled to the concrete surface using neat Portland cement and finished flush with the concrete surface.

6.2 Monitor

The reported concentrations of sub-slab samples in three Residences are greater than the subslab screening level and the indoor air concentrations are less than the indoor air screening level. In accordance with the approved VIIM Work Plan, Terracon proposes to monitor indoor air to demonstrate that indoor air concentrations remain below indoor air screening levels in accordance with the schedule contained in Table 7-1. If monitoring activities identify an exceedance of indoor air screening levels during any indoor air sampling event, Terracon will use the interim measures decision matrix to propose further actions.

6.3 Sample Indoor Air

The reported concentrations of sub-slab samples in four Residences are greater than the sub-slab screening level and indoor air samples were not collected. In accordance with the interim measures decision matrix, Terracon proposes to collect indoor air samples from these Residences.

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Terracon proposes to return to the Residence to conduct indoor air sampling in accordance with the approved VIC Work Plan. Based on the results of sample analysis, Terracon will use the interim measures decision matrix to propose further actions.

6.4 Mitigation Systems

The reported concentrations of sub-slab samples in four Residences are greater than the sub-slab screening level and the indoor air concentrations are greater than the indoor air screening level.

Based on a review of the completed Occupied Dwelling Questionnaire, site conditions, and other factors, these residences were offered a mitigation system, even though the VIIM Work Plan allowed the parties to conduct additional sampling to confirm the initial results.

6.5 Expand Study Area

The proposed study area was developed based on a review of groundwater plume maps and was intended to complete indoor air sampling in those areas where elevated TCE impact in groundwater was observed. Terracon has reviewed the results of sub-slab and indoor air sampling activities and has confirmed that the reported exceedances of screening levels generally occurred within an area that corresponded with groundwater TCE concentrations of greater than $100~\mu g/L$.

The area of sub-slab and indoor air exceedances are generally defined as the 2200 and 2400 blocks of East 4th Street and the east side of the 200 and 300 blocks of Boston Avenue. Terracon observes that screening levels are not exceeded on the south side of the 300 block of East Arlington Street, the west side of the 200 block of Boston Avenue or the 2600 block of East 4th Street.

Screening level exceedances are observed on the east side of the 300 block of Boston Avenue; however, sub-slab and indoor air sampling were not conducted on the west side of the block. In addition, Residences in the 2500 block of East 4th Street did not accept the sampling offer and sampling was not completed in this area. As such, the lateral extent of sub-slab soil gas contamination has not been characterized in these areas. Terracon proposes to prepare a supplement to the VIC Work Plan to conduct sampling of additional Residences immediately adjoining the defined area on the east side of the 300 block of Boston Avenue and the west side of the 400 block of Boston Avenue. The area identified includes approximately 14 Residences. A listing of the Residences included in the expanded study area is provided in Appendix H. The limits of the expanded study area are depicted on Figure 6, Appendix A.

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7.0 SCHEDULE

Based upon currently available information and previously, the proposed schedule is as follows:

Table 7-1 Schedule

Activity	Completion Date/Days to Complete ¹
Complete Indoor Air Sampling per Section 6.3	July 5, 2011
Remove Sampling Ports per Section 6.1	No earlier than July 20, 2011
Receive Analytical Results	August 4, 2011
Receive USEPA Comments on Draft VIC Report	August 4, 2011
Submit Validated Analytical Results to USEPA	August 19, 2011
Submit Supplemental VIC Work Plan per Section 6.52	September 3, 2011
Submit Final VIC Report to USEPA	September 3, 2011 ³
Conduct Indoor Air Monitoring per Section 6.2	Semiannually during 1 st and 3 rd calendar quarters beginning after approval of VIC Report for 2 years, then annually for 3 years

Completion date based on VIC Work Plan approval date of January 6, 2011.

² – Supplemental VIC Work Plan will include schedule for proposed sampling activities.

³ – If the USEPA does not provide comments on the Draft VIC Report by August 4, 2011, the Final VIC Report shall be submitted to USEPA 30 days after all USEPA comments on the Draft VIC Report are received by Terracon.

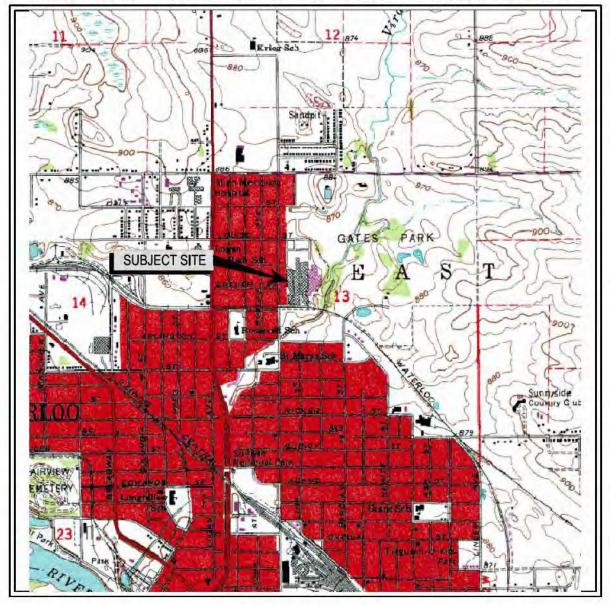


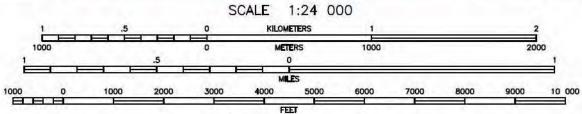
Appendix A

Figures

Figure 1 – Topographic Vicinity Map
Figure 2 – Study Area
Figure 3 – Sampled Residences
Figure 4 – Sample Results
Figure 5 – Proposed Actions Under Decision Matrix
Figure 6 – Proposed Study Area

UNITED STATES - DEPARTMENT OF THE INTERIOR - GEOLOGICAL SURVEY





CONTOUR INTERVAL FEET
NATIONAL GEODETIC VERTICAL DATUM OF 1929
TOPO LINES REPRESENT 10—FOOT CONTOURS

WATERLOO NORTH QUADRANGLE

7.5 MINUTE SERIES (TOPOGRAPHIC)

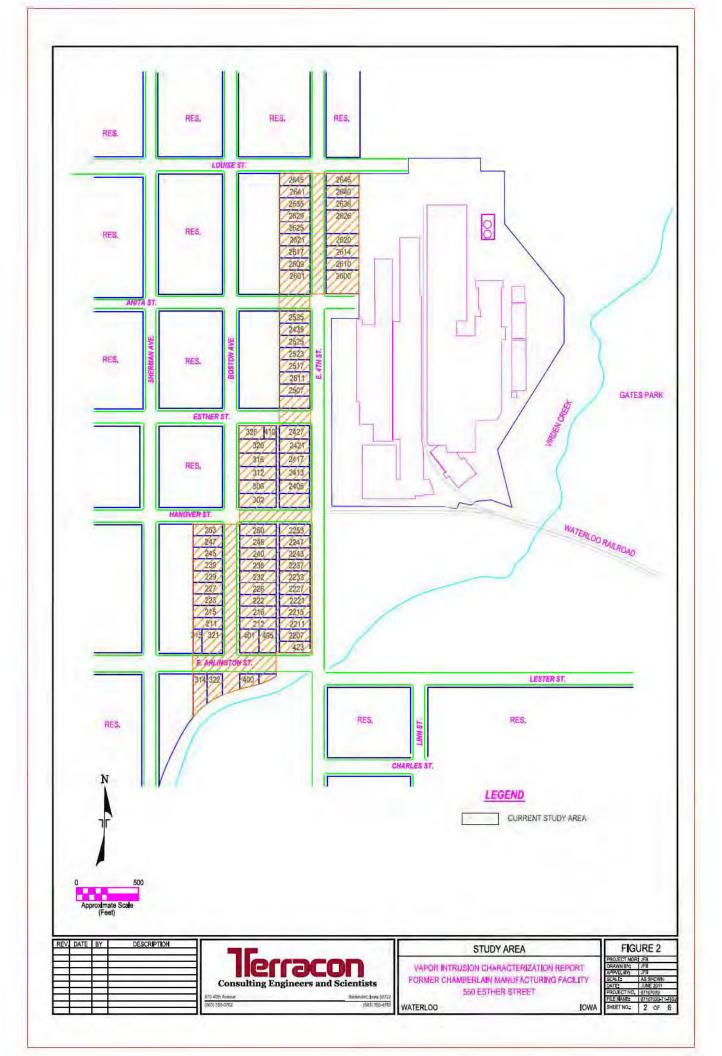
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Drawn By:	JFB	S
Checked By:	JFB	F
Approved By:	JFB	ī

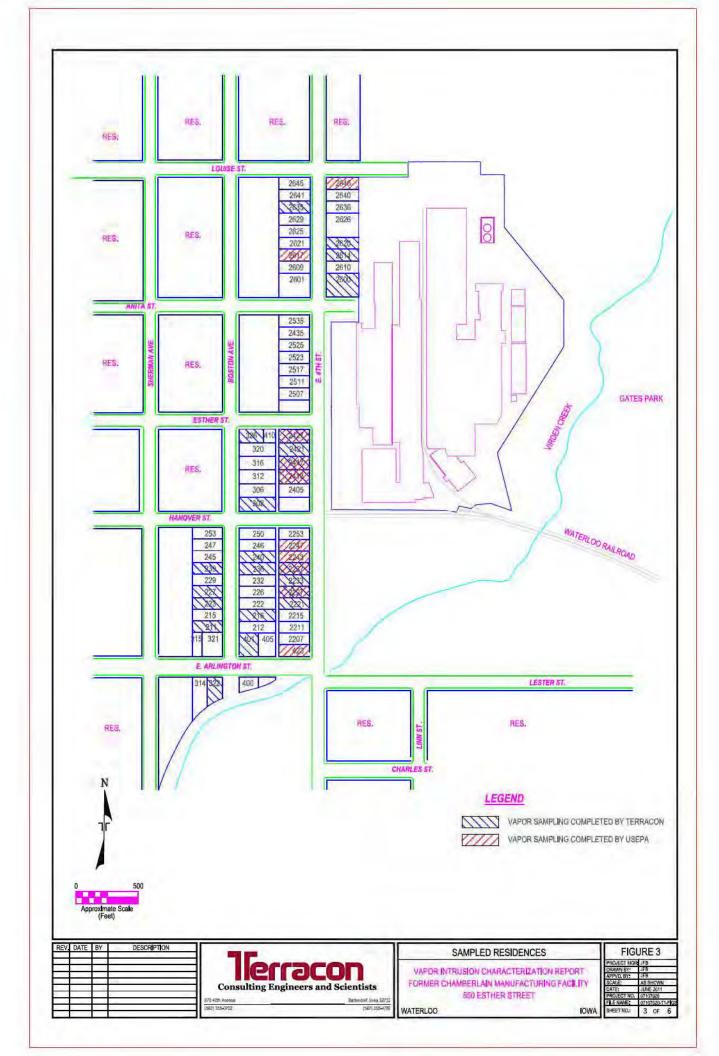
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Date:	JUNE 2011

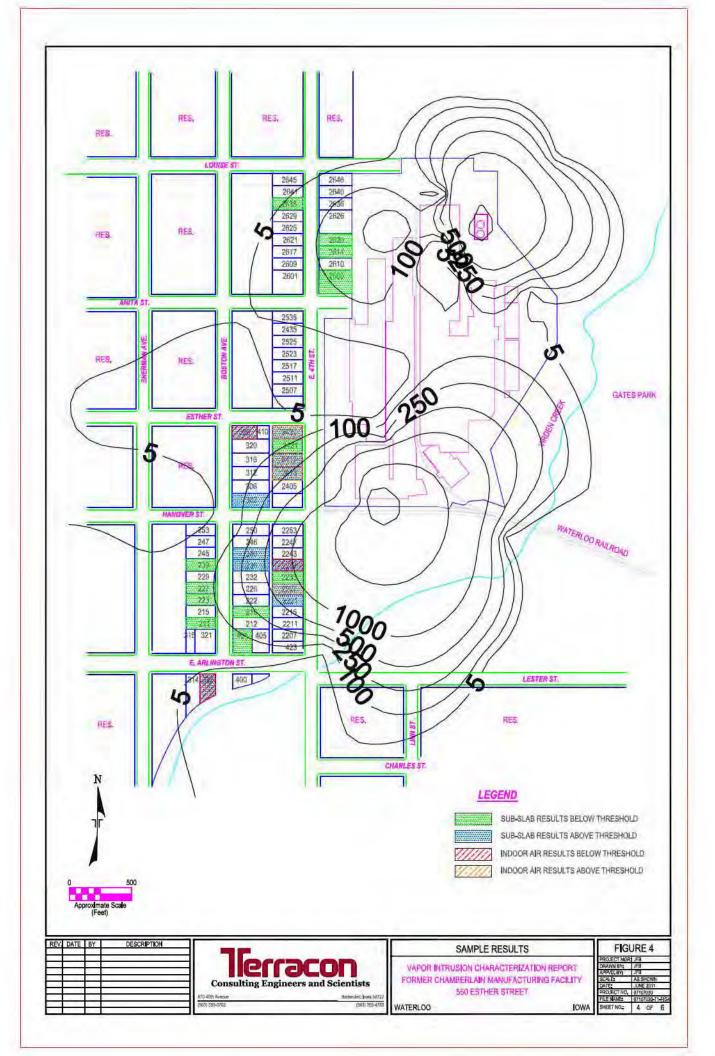
Terr Consulting Engi	acon neers and Scientists
870 40th Avenue	Bettendorf, Iowa 52722
(563) 355-0702	(563) 355-4789

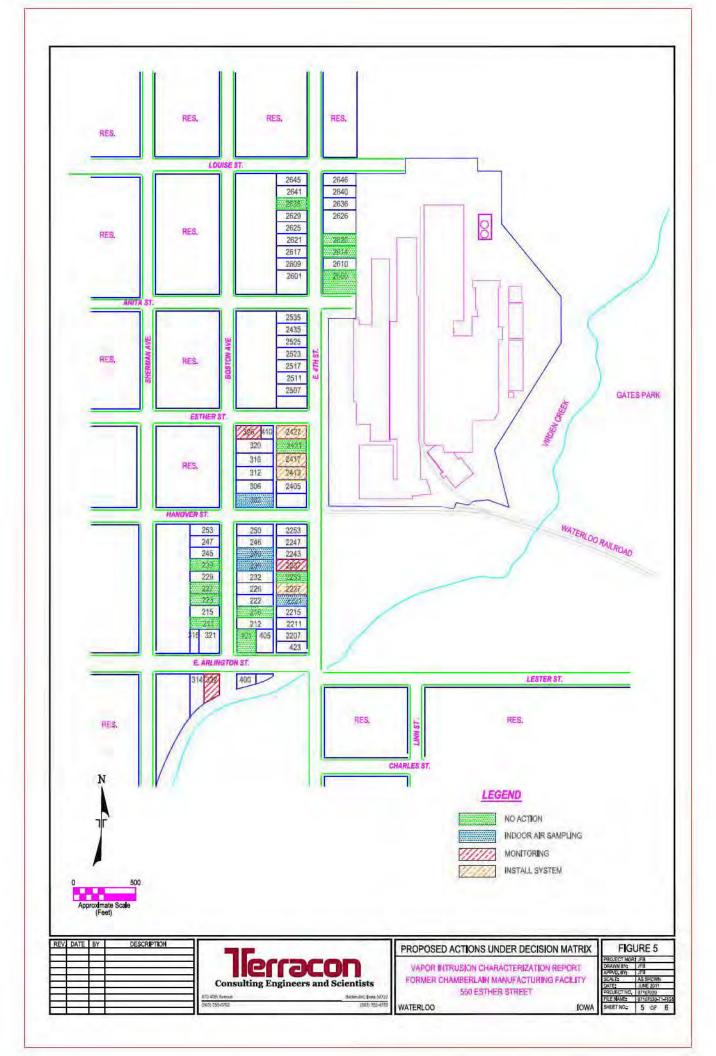
TOPOGRAPHIC VICINITY MAP
VAPOR INTRUSION CHARACTERIZATION REPORT
FORMER CHAMBERLAIN MANUFACTURING FACILITY
550 ESTHER ST.
WATERLOO, IOWA

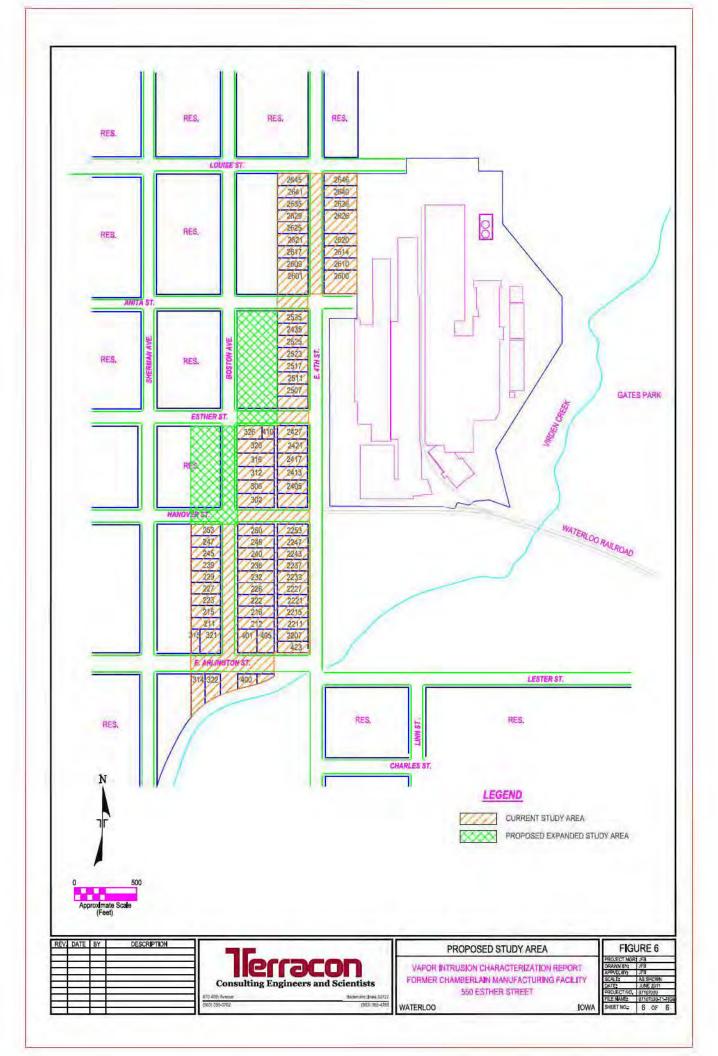
FIG. No.













Appendix B

Tables

Table 1 – Sub-Slab Analytical Results
Table 2 – Indoor Air Analytical Results
Table 3 – Ambient Air/Equipment Blank Analytical Results

TABLE 1
SUB-SLAB ANALYTICAL RESULTS
VAPOR INTRUSION CHARACTERIZATION REPORT
CHAMBERLAIN MANUFACTURING

	LabiD	CUE0002-07	CUD1698-05	CUE0116-02	CUD1690-04	CUE0116-01	CUD1690-01	CUD1690-02	CUE0002-09	CUE0002-19	CUD1690-03
	Sample ID	SS-4	SS-6	SS-10	SS-13	SS-15	SS-17	SSD-17	SS-20	SS-21	SS-22
	Date	4/29/2011	4/27/2011	5/2/2011	4/27/2011	5/2/2011	4/27/2011	4/27/2011	4/29/2011	4/29/2011	4/27/2011
Analyte	Units					-					
Tetrachloroethene	μg/m ³	41	2.2	0.76	1.7	1.9	1.1	1.4	4.5	0.99	13
Trichloroethene	μg/m3	1300	3.8	<0,21	0.096	0.36	< 0.21	0.12	8.3	0.86	25
Vinyl chloride	μg/m3	<2	<0.2	<0.2	<0.2	<0.2	<0.2	< 0.2	<0.2	<0.2	<0.2
trans-1,2-Dichloroethene	μg/m3	<3.2	< 0.32	< 0.32	< 0.32	<0.32	< 0.32	< 0.32	0.27	< 0.32	< 0.32
cis-1,2-Dichloroethene	μg/m3	<3.2	1.2	< 0.32	< 0.32	<0.32	< 0.32	<0.32	< 0.32	< 0.32	0.37
1,1-Dichloroethene	μg/m3	<3.2	< 0.32	<0.32	< 0.32	<0.32	< 0.32	<0.32	<0.32	< 0.32	0.25
1,1-Dichloroethane	μg/m3	0.65	< 0.32	< 0.32	< 0.32	< 0.32	< 0.32	< 0.32	< 0.32	< 0.32	0.38
1,1,1-Trichloroethane	μg/m3	53	0.42	< 0.44	0.31	0.56	0.15	0.18	0.36	0.11	3
1,1,2-Trichlorcethane	μg/m3	<4.4	0.23	<0.44	<0.44	<0.44	<0.44	<0.44	<0.44	<0.44	<0.44
Sub-Slab Organic Vapors	ppm	0.5	<0.1	0.1	0.5	<0.1	1.2	1.2	0.5	0.1	1.2

NOTES: µg/m3 - micrograms per cubic meter

ppm - parts per million

SAMPLE ID NOMENCLATURE: First two letters identify sample type - SS for Sub-Slab, IA for Indoor Air, AA for Ambient Air, and EB for Equipment Blank

A "D" following the first two letters or at the end of the Sample ID designates a sample duplicate

The numeric value following the sample type identify the Residence ID Number

The letter or number following the Residence ID Number indicates the location for Indoor Air samples - B for Basement, 1 for 1st Floor, MF for Main Floor

TABLE 1
SUB-SLAB ANALYTICAL RESULTS
VAPOR INTRUSION CHARACTERIZATION REPORT
CHAMBERLAIN MANUFACTURING

	LabiD	CUD1698-02	CUE0002-03	CUE0002-08	CUE0002-14	CUE0002-15	CUE0002-18	CUE0116-12	CUE0116-13	CUE0116-04	CUD1698-01
	Sample ID	SS-28	SS-33	SS-37	SS-38	SSD-38	SS-39	SS-40	SS-45	SS-46	SS-47
	Date	4/27/2011	4/29/2011	4/29/2011	4/29/2011	4/29/2011	4/29/2011	5/3/2011	5/3/2011	5/3/2011	4/27/2011
Analyte	Units										
Tetrachloroethene	μg/m³	120	- 11	28	130	140	2.9	13	36	29	2.8
Trichloroethene	µg/m3	6000	61	3.3	0.08	0.52	0.32	89	5700	1100	5,8
Vinyl chloride	μg/m3	<16	<1	<0.2	<0.2	<0.2	<0.2	<0.41	<9.3	<5.1	<0.2
trans-1,2-Dichloroethene	μg/m3	<26	<1.6	< 0.32	< 0.32	<0.32	<0.32	< 0.63	<14	<7.9	< 0.32
cis-1,2-Dichloroethene	μg/m3	<26	<1.6	< 0.32	< 0.32	<0.32	< 0.32	<0.63	<14	<7.9	<0.32
1,1-Dichloroethene	μg/m3	<26	<1.6	<0.32	< 0.32	<0.32	<0.32	< 0.63	<14	<7.9	< 0.32
1,1-Dichloroethane	μg/m3	<26	<1.6	<0.32	< 0.32	<0.32	< 0.32	< 0.65	<15	<8.1	< 0.32
1,1,1-Trichloroethane	µg/m3	110	58	3.9	0.24	0.26	<0.44	5	42	13	1.3
1,1,2-Trichloroethane	μg/m3	<35	<2.2	<0.44	< 0.44	<0.44	<0.44	<0.87	<20	<11	<0.44
Sub-Slab Organic Vapors	ppm	1.5	0.1	0.1	0.2	0.2	0.2	0.2	1.1	<0.1	0.2

NOTES: µg/m3 - micrograms per cubic meter

ppm - parts per million

SAMPLE ID NOMENCLATURE: First two letters identify sample type - SS for Sub-Slab, IA for Indoor Air, AA for Ambient Air, and EB for Equipment Blank

A "D" following the first two letters or at the end of the Sample ID designates a sample duplicate

The numeric value following the sample type identify the Residence ID Number

The letter or number following the Residence ID Number indicates the location for Indoor Air samples - B for Basement, 1 for 1st Floor, MF for Main Floor

TABLE 1
SUB-SLAB ANALYTICAL RESULTS
VAPOR INTRUSION CHARACTERIZATION REPORT
CHAMBERLAIN MANUFACTURING

	LabiD	CUE0002-10	CUD1698-03	CUD1698-04	CUE0116-03	CUE0188-01	CUE0188-02			and and	
	Sample ID	SS-48	SS-56	SS-60	SS-62	SS-67	SS-67D	Maximum Detected	Number of	Sub-Slab Screening	Detection
	Date	4/29/2011	4/27/2011	4/27/2011	5/2/2011	5/4/2011	5/4/2011	Concentration	Detections	Level	Limit
Analyte	Units							Charles and Charles		Level	1000
Tetrachloroethene	μg/m ³	15	0.83	2.5	0.77	0.43	0.52	140	26 of 26	4.1	0.54
Trichloroethene	µg/m3	89	3.8	6.2	< 0.21	<0.21	0.081	6000	22 of 26	12	0.215
Vinyl chloride	др/т3	<0.2	<0.2	< 0.2	<0.2	<0.2	<0.2	0	0 of 26	1.6	0.204
trans-1,2-Dichloroethene	μg/m3	< 0.32	< 0.32	< 0.32	< 0.32	<0.32	< 0.32	0.27	1 of 26	630	0.317
cis-1,2-Dichloroethene	μg/m3	<0.32	0.12	< 0.32	< 0.32	< 0.32	< 0.32	1.2	3 of 26	630	0.317
1,1-Dichloroethene	μg/m3	<0.32	< 0.32	< 0.32	< 0.32	<0.32	< 0.32	0.25	1 of 26	2,100	0.317
1,1-Dichloroethane	μg/m3	<0,32	< 0.32	< 0.32	< 0.32	< 0.32	< 0.32	0.65	2 of 26	15	0.324
1,1,1-Trichloroethane	μg/m3	32	0.83	8.5	1.4	< 0.44	0.068	110	23 of 26	52,000	0,436
1,1,2-Trichloroethane	μg/m3	<0.44	<0.44	<0.44	< 0.44	<0.44	<0.44	0.23	1 of 26	1.5	0.36
Sub-Slab Organic Vapors	nom	0.2	0.4	-0.1	<0.1	<0.1	<0.1				

NOTES: µg/m3 - micrograms per cubic meter

ppm - parts per million

SAMPLE ID NOMENCLATURE: First two letters identify sample type - SS for Sub-Slab, IA for Indoor Air, AA for Ambient Air, and EB for Equipment Blank

A "D" following the first two letters or at the end of the Sample ID designates a sample duplicate

The numeric value following the sample type identify the Residence ID Number

The letter or number following the Residence ID Number indicates the location for Indoor Air samples - B for Basement, 1 for 1st Floor, MF for Main Floor

TABLE 2
INDOOR AIR ANALYTICAL RESULTS
VAPOR INTRUSION CHARACTERIZATION REPORT
CHAMBERLAIN MANUFACTURING

	LabiD	CUE0002-04	CUE0002-05	CUE0002-01	CUE0002-02	CUE0002-17	CUE0002-16	CUE0116-09	CUE0116-08	CUE0116-15
	Sample ID	IA-4-B	IA-4-1	IA-33-B	IA-33-1	IA-38-B	IA-38-MF	IA-B-40	IA-1-40	IA-B-45
	Date	4/29/2011	4/29/2011	4/29/2011	4/29/2011	4/29/2011	4/29/2011	5/3/2011	5/3/2011	5/3/2011
Analyte	Units									
Tetrachloroethene	μg/m ³	0.15	0.26	0.19	0.16	2	1.7	0.13	<0.54	< 0.54
Trichloroethene	μg/m3	0.42		0.22	0.33	0.11	0.14	0.18	0.18	21
Vinyl chloride	дд/т3	< 0.2	<0.2	<0.2	< 0.2	<0.2	<0.2	<0.2	<0.2	<0.2
trans-1,2-Dichloroethene	μg/m3	<0.32	< 0.32	< 0.32	<0.32	<0.32	<0.32	< 0.32	< 0.32	< 0.32
cis-1,2-Dichloroethene	μg/m3	<0.32	0.35	<0.32	<0.32	<0.32	<0.32	< 0.32	<0.32	< 0.32
1,1-Dichloroethene	μg/m3	<0.32	<0.32	< 0.32	<0.32	<0.32	<0.32	<0.32	<0.32	<0.32
1,1-Dichloroethane	µg/m3	<0.32	<0.32	< 0.32	<0.32	< 0.32	<0.32	< 0.32	< 0.32	< 0.32
1,1,1-Trichloroethane	μg/m3	0.094	0.087	0.094	0.067	0,2	0.26	<0.44	< 0.44	<0.44
1,1,2-Trichloroethane	µg/m3	<0.44	< 0.44	< 0.44	< 0.44	<0.44	<0.44	< 0.44	< 0.44	< 0.44

NOTES: µg/m3 - micrograms per cubic meter

ppm - parts per million

SAMPLE ID NOMENCLATURE: First two letters identify sample type - SS for Sub-Slab, IA for Indoor Air, AA for Ambient Air, and EB for Equipment Blank

A "D" following the first two letters or at the end of the Sample ID designates a sample duplicate

The numeric value following the sample type identify the Residence ID Number

The letter or number following the Residence ID Number indicates the location for Indoor Air samples - B for Basement, 1 for 1st Floor, MF for Main Floor

TABLE 2
INDOOR AIR ANALYTICAL RESULTS
VAPOR INTRUSION CHARACTERIZATION REPORT
CHAMBERLAIN MANUFACTURING

	LabID	CUE0116-14	CUE0116-05	CUE0116-06	CUE0002-11	CUE0002-12	CUE0002-13	of the state of the		Date Office	
	Sample ID	IA-1-45	IA-B-46	IA-1-46	IA-48-B	IA-48-B-D	IA-48-MF	Maximum Detected	Number of	Sub-Slab Screening	Detection
	Date	5/3/2011	5/3/2011	5/3/2011	4/29/2011	4/29/2011	4/29/2011	Concentration	Detections	Level	Limit
Analyte	Units							The second second		Laver	
Tetrachloroethene	μg/m ³	<0.54	0.29	0.75	1.7	2.5	0.69	2.5	12 of 15	0.41	0.54
Trichloroethene	μg/m3	1.8	0.86	1.2	0.18	0,2	0.16	2.1	15 of 15	1.2	0.215
Vinyl chloride	μg/m3	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0	0 of 15	0.165	0.204
trans-1,2-Dichloroethene	μg/m3	<0.32	< 0.32	< 0.32	< 0.32	< 0.32	< 0.32	0	0 of 15	63	0,317
cis-1,2-Dichloroethene	μg/m3	<0.32	<0.32	< 0.32	<0.32	< 0.32	< 0.32	0.35	1 of 15	63	0.317
1,1-Dichloroethene	μg/m3	<0.32	<0.32	<0.32	<0.32	< 0.32	<0.32	0	0 of 15	210	0.317
1,1-Dichloroethane	μg/m3	<0.32	<0.32	< 0.32	< 0.32	< 0.32	< 0.32	0	0 of 15	1,5	0.324
1,1,1-Trichloroethane	μg/m3	<0.44	< 0.44	1.2	0.13	0.12	0.12	1.2	10 of 15	5200	0.436
1,1,2-Trichloroethane	μg/m3	<0.44	< 0.44	<0.44	< 0.44	< 0.44	< 0.44	0	0 of 15	0.15	0.36

NOTES: µg/m3 - micrograms per cubic meter

ppm - parts per million

SAMPLE ID NOMENCLATURE: First two letters identify sample type - SS for Sub-Slab, IA for Indoor Air, AA for Ambient Air, and EB for Equipment Blank

A "D" following the first two letters or at the end of the Sample ID designates a sample duplicate

The numeric value following the sample type identify the Residence ID Number

The letter or number following the Residence ID Number indicates the location for Indoor Air samples - B for Basement, 1 for 1st Floor, MF for Main Floor

TABLE 3

AMBIENT AIR/EQUIPMENT BLANK ANALYTICAL RESULTS

VAPOR INTRUSION CHARACTERIZATION REPORT

CHAMBERLAIN MANUFACTURING

	Lab ID	CUE0002-06	CUE0116-10	CUE0116-11	CUE0116-07	CUD1698-06	CUE0002-20	CUE0116-16		1000	V. 3
	Sample ID	AA-4	AA-40	AAD-40	AA-46	EB-1	EB-2	EB-3	Maximum Detected	Number of	Detection
	Date	4/29/2011	5/3/2011	5/3/2011	5/3/2011	4/27/2011	4/29/2011	5/3/2011	Concentration	Detections	Limit
Analyte	Units					-			Charles - Principle Co.		
Tetrachloroethene	μg/m ³	0.19	<0.54	< 0.54	< 0.54	1.1	0.93	0.57	0.19	1 of 4	0.54
Trichloroethene	μg/m3	0.088	<0.21	<0.21	<0.21	0,22	<0.21	0.58	0,088	1014	0.215
Vinyl chloride	µg/m3	<0.2	<0.2	<0.2	<0.2	< 0.34	<0.2	< 0.2	NA	0 of 4	0.204
trans-1,2-Dichloroethene	µg/m3	< 0.32	<0.32	<0.32	< 0.32	<0.52	< 0.32	< 0.32	NA.	0 of 4	0.317
cis-1,2-Dichloroethene	jig/m3	<0,32	< 0.32	<0.32	<0.32	<0.52	<0.32	< 0.32	NA	0 of 4	0.317
1,1-Dichloroethene	µg/m3	<0.32	< 0.32	<0.32	< 0.32	<0.52	< 0.32	< 0.32	NA	0 of 4	0.317
1,1-Dichloroethane	μg/m3	<0.32	< 0.32	<0.32	<0.32	< 0.53	< 0.32	< 0.32	NA NA	0 of 4	0.324
1,1,1-Trichloroethane	μg/m3	< 0.44	<0.44	< 0.44	<0.44	<0.72	<0.44	< 0.44	NA NA	0 of 4	0.436
1,1,2-Trichloroethane	µg/m3	< 0.44	<0.44	<0.44	<0.44	<0.72	< 0.44	< 0.44	NA NA	0 of 4	0.36

NOTES: µg/m3 - micrograms per cubic meter

ppm - parts per million

SAMPLE ID NOMENCLATURE: First two letters identify sample type - SS for Sub-Slab, IA for Indoor Air, AA for Ambient Air, and EB for Equipment Blank-

A "D" following the first two letters or at the end of the Sample ID designates a sample duplicate

The numeric value following the sample type identify the Residence ID Number

The letter or number following the Residence ID Number indicates the location for Indoor Air samples - B for Basement, 1 for 1st Floor, MF for Main Floor



Appendix C

Letter to Residences Regarding Sampling and Access



February 4, 2011

Certified Mail/Return Receipt Requested



Re: Residential Sampling Request

As you may know, the United States Environmental Protection Agency ("EPA") recently asked Chamberlain Manufacturing Corporation to do environmental testing of soil vapors beneath certain homes in your neighborhood near the 550 Esther Street property, once owned and operated by Chamberlain Manufacturing and currently owned by the City of Waterloo. As we understand you are the owner(s) and resident(s) of the residence at are writing to describe the process and timing for the sampling, should you choose to have us conduct it.

In the next few months, Terracon Consultants, Inc., a licensed and experienced environmental consulting and engineering company, will be in your neighborhood conducting this sampling. The sampling will provide data to help determine if action may be needed to reduce the potential of certain chemicals entering your home. We are requesting your permission to do this sampling in your home.

The sampling, which is completely voluntary, involves two initial visits of about an hour or less each by courteous and experienced professionals who will display proper identification and respect you and your home.

Here's how it works:

Initial Visit: Sampling Port Installation and Questionnaire

On the first visit, we will install a small sample "port" in your home. The port is installed after wet drilling a 1-inch opening in the concrete floor of your basement or the lowest level of your home such as a crawl-space or slab. After installing the port, the voids are then backfilled with sand and concrete, which will set for at least 48 hours. We will clean-up the work area.

We will also ask for your assistance as our field personnel complete a questionnaire about your home. The questionnaire seeks information regarding your home and the presence of chemicals containing volatile organic compounds, such as paints, glues, stored fuels and drycleaned clothes. According to EPA, these household products can contribute to indoor air quality problems.

Additional Visit(s): Sample Collection

About two days after the first visit, we will return for about 45 minutes to collect a sample from the port. In some instances, we will also take indoor and outdoor air samples. These indoor and outdoor air samples are collected by small canisters that we would leave at your home for 24-hours and would then return to collect.

Terracon Consultants, Inc. 870 40th Avenue Bettendorf, Iowa 52722 www.terracon.com

Residential Sampling Request

February 4, 2011 Terracon Project No. 07107020



Depending on the results of the sampling, one or more additional sampling events may be needed to confirm the results of the previous event. If necessary, we will contact you and make arrangements for any additional sampling events.

Once EPA agrees that sampling in the area is complete, we will remove the sampling port and seal the area where the port was installed at your request.

The results of this sampling will be reviewed by EPA. Following EPA review, a copy of the results will be provided for your records. If the sampling identifies any vapors beneath your home that warrant attention, we will contact you and offer you an EPA-approved system, usually located in your basement, that is designed to reduce any vapors. The system would be installed at no cost to you.

It is important to know that this sampling is a precautionary step. The information we obtain will help us gain a fuller understanding of the conditions in your neighborhood and whether any additional action is needed.

If you would like to have the sampling performed in your home, please complete the enclosed request form and access agreement and mail it to:

Terracon Consultants, Inc. 870 40th Avenue Bettendorf, Iowa 52722

In order to facilitate scheduling, we ask that you return the sampling request form no later than March 11, 2011. After we receive the form, we will call you to schedule a mutually convenient time for us to meet at your home to begin the sampling process.

We appreciate your cooperation in this process. Please contact John Brimeyer at (563) 355-4852 if you have any questions.

Sincerely.

Terracon Consultants, Inc.

John F. Brimeyer, PE Environmental Manager

n F Bringer

Sampling Request Form

Waterloo, IA 50703

(Please complete and return by March 11, 2011)

We hereby provide the City of Waterloo, Chamberlain Manufacturing Corporation, the United States Environmental Protection Agency and their authorized representatives permission to enter the residence listed above at a mutually convenient time for the purpose of collecting samples and completing the questionnaire as outlined in Terracon's letter dated February 4, 2011 and the enclosed access agreement.

Signature of Co-Owner/Resident	Signature of Co-Owner/Resident
	Print Name (if applicable)
Telephone:(Day)	Telephone:(Day)
(Evening)	(Evening)
Dated:, 201	1 Dated:, 2011



ACCESS AGREEMENT

				ACCESS A	GKEEMENT		Date:	2/4/11
DEFINIT	TIONS							
	perty to which acces	s is gran	ted is:	("Pro	perty").			
The Leg		roperty o	r person/entit	y with legal auth	hority to grant access	to the Property is:		
	vices to be conducte g Request letter date				ibed as follows: Collec	ction of samples as	outlined in the F	Resident
	tity granted access ees, agents, and sub				e Services is Terrac	on Consultants, In	c., which shall	include its
	vices are performed lated <u>September 23,</u>		enefit of <u>Chan</u>	<u>nberlain (</u> "Clien	t"), pursuant to the Ag	reement for Service	es between Terr	acon and
By its si	MENTS ignature below, Graing the Services. Gr			authority to, an	d does, grant access	to the Property to	Grantee for the	purpose of
•	other actions relat	ted to the e may al	e exploration so photograpl	of surface or s	y to recover and colle ubsurface conditions le Property and ask (on the Property, a	as necessary to	perform the
	Grantee will make	reasona	ble efforts to r	estore the prop	erty and leave it in a	condition suitable fo	or its previous us	e.
•		the healt	h, safety, or		rantee or undertake Grantee employees			
	Grantor will indem	nify and	hold Grantee I	narmless with r	espect to activities of	Grantee.		
By its sig	gnature below, Gran	tee agree	es:					
•		ilized by	Grantee from		rized by this Access with the exception of			
•	Grantee will remove	ve boring	spoils that ac	cumulate arour	nd the bore holes.			
	Grantee will make	reasona	ble efforts to r	estore the prop	erty and leave it in a	condition suitable fo	or its previous us	e.
	vices and field activi s are completed.	ties auth	orized under t	nis Access Agre	eement may begin aft	er signature of Gra	ntor. Access is o	granted until
SIGNAT Terracor	TURES 1 Consultants, Inc. :							
By:				2/4/11				
Name/Tit	The second secon		nvironmenta	i Manager				
Address: Betteno	dorf, Iowa 52722	е						
Phone:	563.355.4852	Fax	563.355.47	89				
	A							
Grantor	(Owner):		6		Grantor (Co-Owne	er):	Balan	
By:	lo:		Date:		By:		Date:	
Name/Tit Address:					Name/Title: Address:			
	oo, IA 50703				Waterloo, IA 50	703		
3.4.5110	-,0.00	-			Traterios, IA 00	100		



February 4, 2011

Certified Mail/Return Receipt Requested

Certified Mail/Return Receipt Requested





Re: Residential Sampling Request

As you may know, the United States Environmental Protection Agency ("EPA") recently asked Chamberlain Manufacturing Corporation to do environmental testing of soil vapors beneath certain homes in your neighborhood near the 550 Esther Street property, once owned and operated by Chamberlain Manufacturing and currently owned by the City of Waterloo. As we understand you are the owner(s) and resident(s) of the residence at we are writing to describe the process and timing for the sampling, should you choose to have us conduct it.

In the next few months, Terracon Consultants, Inc., a licensed and experienced environmental consulting and engineering company, will be in your neighborhood conducting this sampling. The sampling will provide data to help determine if action may be needed. We are requesting your permission to do this sampling in your home.

The sampling, which is completely voluntary, involves two initial visits of about an hour or less each by courteous and experienced professionals who will display proper identification and respect you and your home.

Here's how it works:

Initial Visit: Sampling Port Installation and Questionnaire

On the first visit, we will install a small sample "port" in your home. The port is installed after wet drilling a 1-inch opening in the concrete floor of your basement or the lowest level of your home such as a crawl-space or slab. After installing the port, the voids are then backfilled with sand and concrete, which will set for at least 48 hours. We will clean-up the work area.

We will also ask for your assistance as our field personnel complete a questionnaire about your home. The questionnaire seeks information regarding your home and the presence of chemicals containing volatile organic compounds, such as paints, glues, stored fuels and drycleaned clothes. According to EPA, these household products can contribute to indoor air quality problems.

Additional Visit(s): Sample Collection

About two days after the first visit, we will return for about 45 minutes to collect a sample from the port. In some instances, we will also take indoor and outdoor air samples. These indoor and outdoor air samples are collected by small canisters that we would leave at your home for 24-hours and would then return to collect.

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Terracon Consultants, Inc. 870 40th Avenue Bettendorf, Iowa 52722 www.terracon.com

Residential Sampling Request

February 4, 2011 Terracon Project No. 07107020



Depending on the results of the sampling, one or more additional sampling events may be needed to confirm the results of the previous event. If necessary, we will contact you and make arrangements for any additional sampling events.

Once EPA agrees that sampling in the area is complete, we will remove the sampling port and seal the area where the port was installed at your request.

The results of this sampling will be reviewed by EPA. Following EPA review, a copy of the results will be provided for your records. If the sampling identifies any vapors beneath your home that warrant attention, we will contact you and offer you an EPA-approved system, usually located in your basement, that is designed to reduce any vapors. The system would be installed at no cost to you.

It is important to know that this sampling is a precautionary step. The information we obtain will help us gain a fuller understanding of the conditions in your neighborhood and whether any additional action is needed.

If you would like to have the sampling performed in your home, please complete the enclosed request form and access agreement and mail it to:

> Terracon Consultants, Inc. 870 40th Avenue Bettendorf, Iowa 52722

We have included separate sampling forms for each party.

In order to facilitate scheduling, we ask that you return the sampling request form no later than March 11, 2011. After we receive the form, we will call you to schedule a mutually convenient time for us to meet at your home to begin the sampling process.

We appreciate your cooperation in this process. Please contact John Brimeyer at (563) 355-4852 if you have any questions.

Sincerely,

Terracon Consultants, Inc.

John F. Brimeyer, PE

Environmental Manager

Sampling Request Form for Owner(s)

Waterloo, IA 50703

(Please complete and return by March 11, 2011)

We hereby provide the City of Waterloo, Chamberlain Manufacturing Corporation, the United States Environmental Protection Agency and their authorized representatives permission to enter the residence listed above at a mutually convenient time for the purpose of collecting samples and completing the questionnaire as outlined in Terracon's letter dated February 4, 2011 and the enclosed access agreement.

Signature of Owner	Signature of Co-Owner
-	
	Print Name (if applicable)
Telephone:(Day)	. Telephone:(Day)
(Evening)	(Evening)
Dated:, 2011	Dated: , 2011

Sampling Request Form for Resident(s)

Waterloo, IA 50703

(Please complete and return by March 11, 2011)

We hereby provide the City of Waterloo, Chamberlain Manufacturing Corporation, the United States Environmental Protection Agency and their authorized representatives permission to enter the residence listed above at a mutually convenient time for the purpose of collecting samples and completing the questionnaire as outlined in Terracon's letter dated February 4, 2011 and the enclosed access agreement.

Signature of Resident	Signature of Co-Resident
Print Name	Print Name (if applicable)
Telephone:(Day)(Evening)	Telephone:(Day)(Evening)
Dated:, 2011	Dated:, 2011

Terracon

Address:

Phone:

Fax:

ACCESS A	AGREEMENT
	Date:2/4/11
DEFINITIONS	
The property to which access is granted is: ("Prop	erty").
The Legal Owner(s) of the Property or person/entity with legal aut ("Grantor(s)").	hority to grant access to the Property is:
The services to be conducted on the Property are generally descr Sampling Request letter dated February 4, 2011. ("Services").	ibed as follows: Collection of samples as outlined in the Resident
The entity granted access for the purposes of performing the employees, agents, and subcontractors ("Grantee").	e Services is Terracon Consultants, Inc., which shall include its
The Services are performed for the benefit of <u>Chamberlain Masservices</u> between Terracon and Client, dated <u>September 23, 2016</u>	anufacturing Corporation ("Client"), pursuant to the Agreement for 0.
AGREEMENTS	
	nd does, grant access to the Property to Grantee for the purpose of
 Grantee may bring sampling equipment on the Propert other actions related to the exploration of surface or s 	by to recover and collect soil, water, and other samples, and perform subsurface conditions on the Property, as necessary to perform the ne Property and ask Grantor to assist in completing a questionnaire
	perty and leave it in a condition suitable for its previous use.
 Grantor will not interfere with any of the activities of G 	Grantee or undertake any actions regarding the use of Property that e Grantee employees, agents, or subcontractors, or damage their
equipment, materials, or property.	, whether 10,40,700,100 and 100 and 10
 Grantor will indemnify and hold Grantee harmless with r 	espect to activities of Grantee.
and equipment utilized by Grantee from the Property, premises to designate sampling areas, Grantee will remove boring spoils that accumulate arouse. Grantee will make reasonable efforts to restore the property.	perty and leave it in a condition suitable for its previous use.
The Services and field activities authorized under this Access Agr Services are completed.	reement may begin after signature of Grantor. Access is granted until
SIGNATURES Terracon Consultants, Inc. :	
By: Date: 2/4/11	
Name/Title: John F. Brimeyer, Environmental Manager	f)
Address: 870 40th Avenue	
Bettendorf, Iowa 52722	
Phone: 563.355.4852 Fax: 563.355.4789	
	in the latest the second of the
Grantor (Owner):	Grantor (Co-Owner):
By: Date:	By: Date:
Name/Title:	Name/Title:
Address:	Address:
Phone: Fax:	Phone: Fax:
Grantor (Pasident)	Grantor (Co. Pecident)
Grantor (Resident): By: Date:	Grantor (Co-Resident): By: Date:
Nemo/Title:	Namo/Titlo:

Address:

Phone:

Fax:

	PROPERTY		RENTER, IF APPLICABLE				
ID	Address	Owner	Owner Address	Owner City, State	Sampling Approved by Owner?	Resident	Sampling Approved by Renter?
1	314 E. Arlington St.		PO Box 532	Waterloo, IA 50704	No		No
2	315 E. Arlington St.		7956 Winston Place	Waterloo, IA 50701	No		No
3	321 E. Arlington St.		321 E. Arlington St.	Waterloo, IA 50703	No		NA NA
4	322 E. Arlington St.		B22 E. Arlington St.	Waterloo, IA 50703	Yes		NA
5	400 E. Arlington St.		312 W 1st Street	Cedar Falls, IA 50613	No		No
6	401 E. Arlington St.		2516 Ashland Ave.	Cedar Falls, IA 50613	Yes		No
7	405 E. Arlington St.		405 E. Arlington St.	Waterloo, IA 50703	No		NA NA
8	423 E. Arlington St.		423 E. Arlington St.	Waterloo, IA 50703	Yes		NA NA
9	410 Esther St.		829 Cloverdale Ave.	Waterloo, IA 50703	Yes		No
10	211 Boston Ave.		211 Boston Ave.	Waterloo, IA 50703	Yes		NA
11	212 Boston Ave.		1956 Winston Place	Waterloo, IA 50701	No		No
12	215 Boston Ave.		215 Boston Ave.	Waterloo, IA 50703	No		No
13	216 Boston Ave.		603 N Linn	New Hampton, IA 50659	Yes		No
14	222 Boston Ave.		1956 Winston Place	Waterloo, IA 50701	No		No
15	223 Boston Ave.		223 Boston Ave.	Waterloo, IA 50703	Yes		NA.
16	226 Boston Ave.		226 Boston Ave.	Waterloo, IA 50703	No		NA.
17	227 Boston Ave.		31942 Liberty Ave.	Parkersburg, IA 50665	Yes		Yes
18	229 Boston Ave.		PO Box 567	Gilbertville, IA 50634	No		No
19	232 Boston Ave.		232 Boston Ave.	Waterloo, IA 50703	No		NA.
20	236 Boston Ave.		236 Boston Ave.	Waterloo, IA 50703	Yes		NA NA
21	239 Boston Ave.		239 Boston Ave.	Waterloo, IA 50703	Yes		NA NA
22	240 Boston Ave.		240 Boston Ave.	Waterloo, IA 50703	Yes		NA NA
23	245 Boston Ave.		245 Boston Ave.	Waterloo, IA 50703	Yes		NA
24	246 Boston Ave.		246 Boston Ave.	Waterloo, IA 50703	No		NA
25	249 Boston Ave.		249 Boston Ave.	Waterloo, IA 50703	No		NA.
26	250 Boston Ave.		250 Boston Ave.	Waterloo, IA 50703	No		No
27	253 Boston Ave.		253 Boston Ave.	Waterloo, IA 50703	Yes		NA.
28	302 Boston Ave.		302 Boston Ave.	Waterloo, IA 50703	Yes		NA NA
29	306 Boston Ave.		306 Boston Ave.	Waterloo, IA 50703	No		NA NA
30	312 Boston Ave.		5216 LaFayette Road	Waterloo, IA 50707	No		No
31	316 Boston Ave.		316 Boston Ave.	Waterloo, IA 50703	No		NA NA
32	320 Boston Ave.		PO Box 567	Gilbertville, IA 50634	No		No
33	326 Boston Ave.		326 Boston Ave.	Waterloo, IA 50703	Yes		NA NA
34	2207 E. 4th St.		2207 E. 4th St.	Waterloo, IA 50703	No		NA NA
35	2211 E. 4th St.		2245 Burton Ave.	Waterloo, IA 50703	No		No
36	2215 E. 4th St.		2215 E. 4th St.	Waterloo, IA 50703	No		NA NA
37	2221 E. 4th St.		2221 E. 4th St.	Waterloo, IA 50703	Yes		NA NA
38	2227 E. 4th St.		2227 E. 4th St.	Waterloo, IA 50703	Yes		NA.

ID.	PROPERTY	Owner	OWNER Owner Address	Owner City, State	Sampling Approved by Owner?	RENTER, IF A	PPLICABLE Sampling Approved by Renter?
39	2233 E. 4th St.		233 E. 4th St.	Waterloo, IA 50703	Yes	-1800	NA NA
40	2237 E. 4th St.		237 E. 4th St.	Waterloo, IA 50703	No		No
41	2243 E. 4th St.		2243 E. 4th St.	Waterloo, IA 50703	No		NA.
42	2247 E. 4th St.		247 E. 4th St.	Waterloo, IA 50703	No		NA NA
43	2253 E. 4th St.		207 West 3rd St.	Cedar Falls, IA 50613	No		No
44	2405 E. 4th St.		500 Pine St.	Waterloo, IA 50703	No		No
	2413 E. 4th St.		2413 E. 4th St.	Waterloo, IA 50703	Yes		NA NA
	2417 E. 4th St.		2126 Yorkshire Dr.	Cedar Falls, IA 50613	Yes		No
47	2421 E. 4th St.		2421 E. 4th St.	Waterloo, IA 50703	Yes		NA
48	2427 E. 4th St.		2427 E. 4th St.	Waterloo, IA 50703	Yes		NA NA
49	2507 E. 4th St.		2507 E. 4th St.	Waterloo, IA 50703	No		NA
50	2511 E. 4th St.		2511 E. 4th St.	Waterloo, IA 50703	No		NA.
51	2515 E. 4th St.		100 Tanglewood Dr.	Freeport, IL 61032	No		No
52	2523 E. 4th St.		416 Sullivan Ave #206	Waterloo, IA 50701	No		No
	2525 E. 4th St.		2525 E. 4th St.	Waterloo, IA 50703	No		NA
54	2533 E. 4th St.		2533 E. 4th St.	Waterloo, IA 50703	No		NA
55	2535 E. 4th St.		PO Box 622	Cedar Falls, IA 50613	No		No
56	2600 E. 4th St.		2600 E. 4th St.	Waterloo, IA 50703	Yes		NA NA
57	2601 E. 4th St.		2601 E. 4th St.	Waterloo, IA 50703	No		NA.
	2609 E. 4th St.		2609 E. 4th St.	Waterloo, IA 50703	No		NA NA
	2610 E. 4th St.		404 Union St. PO Box 1	Ionia , IA 50645	No		No
	2614 E. 4th St.		323 Progress Ave.	Waterloo, IA 50701	Yes		No
	2617 E. 4th St.		2617 E. 4th St.	Waterloo, IA 50703	No		NA NA
62	2620 E. 4th St.		846 Hawthorn Lane	Grayson, GA 30017	No		Yes
63	2621 E. 4th St.		2621 E. 4th St.	Waterloo, IA 50703	No		NA
	2625 E. 4th St.		425 1/2 Webster St.	Waterloo, IA 50703	No		No
65	2626 E. 4th St.		915 West 5th St.	Waterloo, IA 50702	No		No
66	2629 E. 4th St.		2629 E. 4th St.	Waterloo, IA 50703	No		NA NA
	2635 E. 4th St.		2635 E. 4th St.	Waterloo, IA 50703	Yes		NA
	2636 E. 4th St.		PO Box 567	Gilbertville, IA 50634	No		No
	2640 E. 4th St.		2798 200th St.	Dysart, IA 52224	No		No
_	2641 E. 4th St.		2641 E. 4th St.	Waterloo, IA 50703	No		NA.
71	2645 E. 4th St.		2645 E. 4th St.	Waterloo, IA 50703	No		N/A
72	2646 E. 4th St.		33871 302nd St.	Cedar Falls, IA 50613	Yes		No



Appendix D

Completed Occupied Dwelling Questionnaires

OCCUPIED DWELLING QUESTIONNAIRE

Date:	4/24/2011
1.	Name:
	Address: 322 F Avlington
	Home Phone: Work Phone:
2.	What is the best time to call to speak with you? At: Work or Home ?
3.	Are you the Owner , Renter , Other (please specify) of this Home/Structure?
4.	Total number of occupants/persons at this location?\ Number of children? Ages?
5.	How long have you lived at this location? 36
Gener	al Home Description
6.	Type of Home/Structure (check only one): Single Family Home ☒, Duplex ☒, Condominium☐, Townhouse☐, Other ☐
7.	Home/Structure Description: number of floors\ Basement? Yes \(\text{No} \) Crawl Space? Yes \(\text{No} \) If Yes, under how much of the house's area? \(\text{No} \)_\%
8.	Age of Home/Structure:
9.	General Above-Ground Home/Structure construction (check all that apply): Wood \square , Brick \square , Concrete \square , Cement block \square , Other \square
10.	Foundation Construction (check all that apply): Concrete slab Fieldstone Concrete block

	Elevated above ground/grade Other
11.	
	Public water supply 🔯
	Private well
	Bottled water 🔾
	Other, please specify
12.	Do you have a private well for purposes other than drinking?
	Yes D No A
	If yes, please describe what you use the well
	for:
13.	Do you have a septic system? Yes \(\sigma \) No \(\sigma \) Not used \(\sigma \) Unknown \(\sigma \)
14.	Do you have standing water outside your home (pond, ditch, swale)? Yes \(\omega\) No \(\omega\).
Basi	ement Description, please check appropriate boxes.
	ou do not have a basement go to question 23.
15.	Is the basement finished □ or unfinished ☒?
16.	If finished, how many rooms are in the basement?
10,	How many are used for more than 2 hours/day?
17.	Is the basement floor (check all that apply) concrete ⊠, tile □, carpeted □, dirt □, other □ (describe) ?
18.	Are the basement walls poured concrete \Box , cement block ∇ , stone \Box , wood \Box , brick \Box , other \Box
19.	Does the basement have a moisture problem (check one only)?
	Yes, frequently (3 or more times/yr) \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \
	Yes, occasionally (1-2 times/yr)
	Yes, rarely (less than 1 time/yr)
	№ 🗖
20.	Does the basement ever flood (check one only)?
	Yes, frequently (3 or more times/yr)
	Yes, occasionally (1-2 times/yr) □
	Yes, jarely (less than I time/yr) \(\sigma\) No \(\sigma\)
21.	Does the basement have any of the following? (check all that apply) Floor cracks Q,
	Wall cracks □, Sump □, Floor drain ☒, Other hole/opening in floor □
	(describe)

22.	Are any of the following used or stored in the basement (check all that apply) Paint Paint stripper/remover Paint thinner					
	Metal degreaser/cleaner ☐ Gasoline ☐ Diesel fuel ☐ Solvents ☐ Glue ☐					
	Laundry spot removers Drain cleaners D Pesticides D					
23.	Have you recently (within the last six months) done any painting or remodeling in your home? Yes No No					
	If yes, please specify what was done, where in the home, and what month:					
24.	Have you installed new carpeting in your home within the last year? Yes□ No 🎉 If yes, when and where?					
25.	Do you regularly use or work in a dry cleaning service (check only one box)? Yes, use dry-cleaning regularly (at least weekly) Yes, use dry-cleaning infrequently (monthly or less) Yes, work at a dry cleaning service No.					
26.	Does anyone in your home use solvents at work? Yes U If yes, how many persons No I Ino, go to question 28					
27.	If yes for question 26 above, are the work clothes washed at home? Yes 🔾 No 🔾					
28.	Where is the washer/dryer located? Basement 📈					
	Upstairs utility room 🖵					
	Kitchen □ Garage □					
	Use a Laundromat 🔾					
	Other, please specify 🗆					
29.	If you have a dryer, is it vented to the outdoors? Yes No 🗆					
30.	What type(s) of home heating do you have (check all that apply) Fuel type: Gas ♥, Oil □, Electric □, Wood □, Coal □, Other					
	Heat conveyance system: Forced hot air Forced hot water □					
	Steam 🖸					
	Radiant floor heat					
	Wood stove 🗆					
	Coal furnace					
	Fireplace □ Other					

31.	Do you have air conditioning? Yes No . If yes, please check the appropriate type(s) Central air conditioning
	Window air conditioning unit(s)
32.	Other , please specify Do you use any of the following? Room fans , Ceiling fans , Attic fan Do you ventilate using the fan-only mode of your central air conditioning or forced air heating system? Yes No
33.	Has your home had termite or other pesticide treatment: Yes No Unknown If yes, please specify type of pest controlled, Living and approximate date of service
34.	Water Heater Type: Gas X, Electric □, By furnace □, Other
	Water heater location: Basement (Upstairs utility room □, Garage □, Other □ (please describe)
35.	What type of cooking appliance do you have? Electric □, Gas ズ, Other □
36.	Is there a stove exhaust hood present? Yes No Does it vent to the outdoors? Yes No No
37.	Smoking in Home: None (I), Rare (only guests), Moderate (residents light smokers), Heavy (at least one heavy smoker in household)
38.	If yes to above, what do they smoke? Cigarettes □ Cigars □ Pipe □ Other □
39.	Do you regularly use air fresheners? Yes 💆 No 🗆
40.	Does anyone in the home have indoor home hobbies of crafts involving: None ☐ Heating ☐, soldering ☐, welding ☐, model glues ☐, paint ☐, spray paint, wood finishing ☐, Other ☐ Please specify what type of hobby:
41.	General family/home use of consumer products (please circle appropriate): Assume that Never = never used, Hardly ever = less than once/month, Occasionally = about once/month, Regularly = about once/week, and Often = more than once/week.
Produ	ct Frequency of Use
Spray	on decodorant Never Hardly ever Occasionally Regularly Often

Aerosol deodorizers	Never	Hardly ever	Occasionally	Regularly	Often	
Insecticides	Never	Hardly ever	Occasionally	Regularly	Often	
Disinfectants	Never	Hardly ever	Occasionally	Regularly	Often -	Leach
(Question 41, continued) Product	Frequence	cy of Use				
Window cleaners	Never	Hardly ever	Occasionally	Regularly	Often	
Spray-on oven cleaners (Never	Hardly ever	Occasionally	Regularly	Often	
Nail polish remover	Never	Hardly ever	Occasionally	Regularly	Often	
Hair sprays	Never (Hardly ever) Occasionally	Regularly	Often	
Please check week! Dusting Dry sweeping Vacuuming Polishing (furniture Washing/waxing flood	, etc) Ş I. —		ices:			
43. Other comments:			100 - 2000			
, , , , , , , , , , , , , , , , , , ,						

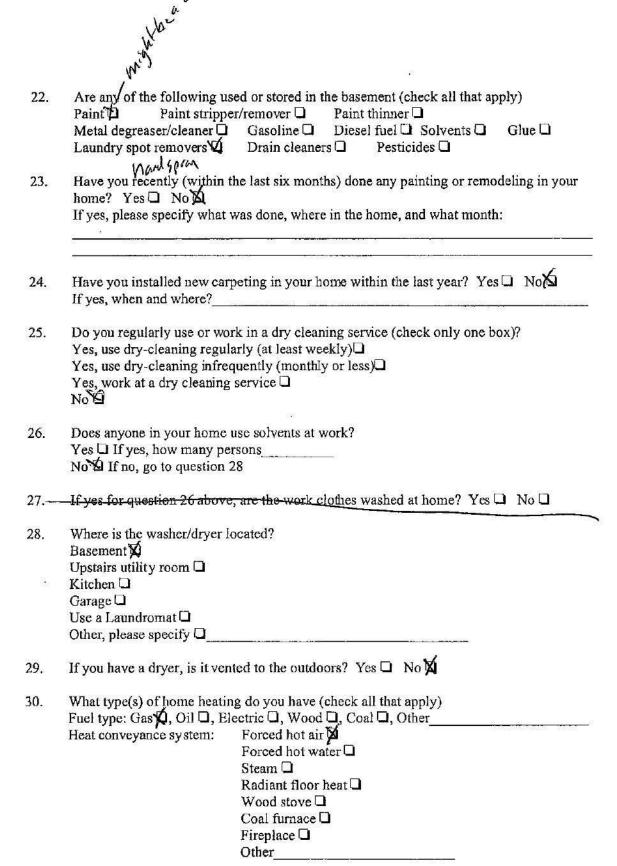
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6

OCCUPIED DWELLING QUESTIONNAIRE

Date:	4-26-11
1.	Name:
	Address: 401 E, Arlington ST.
	Home Phone: Work Phone:
2.	What is the best time to call to speak with you? Comba! At: Work a or Home
3.	Are you the Owner □, Renter ★, Other □ (please specify) of this Home/Structure?
4.	Total number of occupants/persons at this location? Number of children? Ages?
5.	How long have you lived at this location? 20
Gener	ral Home Description
6.	Type of Home/Structure (check only one): Single Family Home ✓, Duplex □, Condominium □, Townhouse □, Other □
7.	Home/Structure Description: number of floors Basement? Yes No C Crawl Space? Yes No No C If Yes, under how much of the house's area? 100 %
8.	Age of Home/Structure: years, Not sure/Unknown
9.	General Above-Ground Home/Structure construction (check all that apply): Wood Q, Brick Q, Concrete Q, Cement block Q, Other Q
10.	Foundation Construction (check all that apply): Concrete slab Fieldstone Concrete block Concrete block

	Elevated above ground/grade Other
11.	What is the source of your drinking water (check all that apply)?
	Public water supply &
	Private well Q
	Bottled water 🖵
	Other, please specify
12.	Do you have a private well for purposes other than drinking? Yes No No And
	If yes, please describe what you use the well
	for:
13.	Do you have a septic system? Yes \(\bar{\pi} \) No \(\bar{\pi} \) Not used \(\bar{\pi} \) Unknown \(\bar{\pi} \)
14.	Do you have standing water outside your home (pond, ditch, swale)? Yes D No
	ment Description, please check appropriate boxes. u do not have a basement go to question 23.
15.	Is the basement finished □ or unfinished ☒?
16.	If finished, how many rooms are in the basement?
	How many are used for more than 2 hours/day?
17.	Is the basement floor (check all that apply) concrete \(\mathbb{A}\), tile \(\mathbb{Q}\), carpeted \(\mathbb{Q}\), dirt \(\mathbb{Q}\), other\(\mathbb{Q}\) (describe)
18.	Are the basement walls poured concrete , cement block , stone , wood , brick , other appears to be coment block ? Does the basement have a moisture problem (check one only)?
19.	Does the basement have a moisture problem (check one only)?
	Yes, frequently (3 or more times/yr)
	Yes, occasionally (1-2 times/yr)
	Yes, rarely (less than 1 time/yr) When the good
	Other appear to be count block Does the basement have a moisture problem (check one only)? Yes, frequently (3 or more times/yr) A Yes, occasionally (1-2 times/yr) Whenever year Yes, rarely (less than 1 time/yr) Whenever year get a good rain No O
20.	Does the basement ever flood (check one only)?
	Yes, frequently (3 or more times/yr)
	Yes, occasionally (1-2 times/yr)
	Yes, rarely (less than 1 time/yr)
	Note
21.	Does the basement have any of the following? (check all that apply) Floor cracks A,
	Wall cracks , Sump , Floor drain , Other hole/opening in floor
	(describe)



31.	Do you have air conditioning? Yes No . If yes, please check the appropriate type(s) Central air conditioning . Window air conditioning unit(s)
32.	Other , please specify Do you use any of the following? Room fans , Ceiling fans , Attic fan Do you ventilate using the fan-only mode of your central air conditioning or forced air heating system? Yes No
33,	Has your home had termite or other pesticide treatment: Yes No U Unknown I If yes, please specify type of pest controlled, and approximate date of service fulliles ~ 15 years myo
34.	Water Heater Type: Gas □, Electric ♥, By furnace □, Other 2 goos old □ Water heater location: Basement ゼ, Upstairs utility room □, Garage □, Other □ (please describe)
35.	What type of cooking appliance do you have? Electric □, Gas (, Other
36.	Is there a stove exhaust hood present? Yes \(\begin{array}{ccccc} \text{No } \begin{array}{ccccc} \text{No } \begin{array}{ccccc} \text{No } \begin{array}{ccccc} \text{No } \begin{array}{ccccc} \text{No } \begin{array}{cccccccccc} \text{No } \begin{array}{cccccccccccccccccccccccccccccccccccc
37.	Smoking in Home: None □, Rare (only guests)□, Moderate (residents light smokers) Heavy (at least one heavy smoker in household)□
38.	If yes to above, what do they smoke? Cigarettes
39.	Do you regularly use air fresheners? Yes \(\sigma\) No \(\sigma\) e' \(\frac{e'}{a}\) ocassio
40.	Does anyone in the home have indoor home hobbies of crafts involving: None Heating \square , soldering \square , welding \square , model glues \square , paint \square , spray paint, wood finishing \square , Other \square Please specify what type of hobby:
41.	General family/home use of consumer products (please circle appropriate): Assume that Never = never used, Hardly ever = less than once/month, Occasionally = about once/month, Regularly = about once/week, and Often = more than once/week.
Produ	ct Frequency of Use
Spray-	on deodorant (Never) Hardly ever Occasionally Regularly Often

				-		
Aero	sol deodorizers	Never	Hardly ever (Occasionally	Regularly	Often
Insec	ticides	Never	Hardly ever	Occasionally	Regularly	Often
Disin	rfectants	Never	Hardly ever	Occasionally	Regularly	Often
(Que:	stion 41, continued)	Frequen	cy of Use			
Wind	low cleaners	Never	(Hardly ever)	Occasionally	Regularly	Often
Spray	v-on oven cleaners	Never	Hardly ever	Occasionally	Regularly	Often
Nail j	oolish remover	Never	Hardly ever	Occasionally (Regularly	Often
Hair s	sprays	Never	Hardly ever (Occasionally	Regularly	Often
42.	Please check weel Dusting (1) Dry sweeping (2) Vacuuming (2) Polishing (furnitum Washing/waxing to Other (2)	re, etc) 🔄		ces: Just Sand	led	
43.	Other comments:			re arm is a War		
		T - 75				4
- W. W. I.				1,4		(88 2 01) 10-5925 1
	2 2					

OCCUPIED DWELLING QUESTIONNAIRE

Date:	4/28/11
1.	Name:
	Address: 211 Boston Avenue
	Home Phone: Work Phone:
2.	What is the best time to call to speak with you? At: Work or Home
3.	Are you the Owner Renter , Other (please specify) of this Home/Structure?
4.	Total number of occupants/persons at this location? Number of children? Ages?
5.	How long have you lived at this location? 254 cars
Gener	al Home Description
6.	Type of Home/Structure (check only one): Single Family Home Duplex D, Condominium D, Townhouse D, Other D
7.	Home/Structure Description: number of floors Basement? Yes No Compared No Screen No Scr
8.	Age of Home/Structure: 1950 years, Not sure/Unknown 🗆
9.	General Above-Ground Home/Structure construction (check all that apply): Wood Brick D, Concrete D, Cement block D, Other D
10.	Foundation Construction (check all that apply): Concrete slab Fieldstone Concrete block

	Elevated above ground/grade Other
11.	What is the source of your drinking water (check all that apply)?
	Public water supply
	Private well
	Bottled water □
	Other, please specify
12.	Do you have a private well for purposes other than drinking? Yes \(\sigma \) No \(\sigma \)
	If yes, please describe what you use the well for:
13.	Do you have a septic system? Yes \(\sigma\) Not used \(\sigma\) Unknown \(\sigma\)
14.	Do you have standing water outside your home (pond, ditch, swale)? Yes O No
	ement Description, please check appropriate boxes. au do not have a basement go to question 23.
15.	Is the basement finished Kor unfinished \square ?
16.	If finished, how many rooms are in the basement? How many are used for more than 2 hours/day?
17.	Is the basement floor (check all that apply) concrete X tile \Omega , carpeted \Omega , dirt \Omega ,
18.	other (describe) ? Are the basement walls poured concrete , cement block (A), stone , wood , brick , other ?
19.	Does the basement have a moisture problem (check one only)? Yes, frequently (3 or more times/yr)
	Yes, occasionally (1-2 times/yr)
	Yes, rarely (less than 1 time/yr) □ No □
20.	Does the basement ever flood (check one only)?
	Yes, frequently (3 or more times/yr)
	Yes, occasionally (1-2 times/yr)
	Yes, rarely (less than 1 time/yr) \(\sigma\) No \(\sigma\)
21.	Does the basement have any of the following? (check all that apply) Floor cracks , Wall cracks , Sump , Floor drain , Other hole/opening in floor (describe)

22.	Paint Paint stripp	sed or stored in the basement (check all that apply) er/remover Paint thinner Solvents Glue Glue Prain cleaners Pesticides Solvents
23.	home? Yes 🗆 No 💌	the last six months) done any painting or remodeling in your was done, where in the home, and what month:
24.	rc 1 1 1 0	peting in your home within the last year? Yes Now
25.	Yes, use dry-cleaning regu	quently (monthly or less)
26.	Does anyone in your home Yes I If yes, how many pe No In no, go to question	ersons
27:	If yes for question 26 above	e, are the work clothes washed at home? Yes 🗆 No 🔾
28.	Where is the washer/dryer Basement Upstairs utility room Kitchen Garage Use a Laundromat Other, please specify	located?
29.	If you have a dryer, is it ver	nted to the outdoors? Yes 🗶 No 🗆
30.		ng do you have (check all that apply) lectric , Wood , Coal , Other Forced hot air Steam Radiant floor heat Wood stove Coal furnace Fireplace Other

31.	Do you have air conditioning? You Central air conditioning	es X No 🗆.	If yes, please	check the appropriate type(s)
	Window air conditioning unit(s)			it is warm
	Other , please specify			
32.	Do you use any of the following? Do you ventilate using the fan-onl heating system? Yes \(\sigma\) No			
33.	Has your home had termite or other If yes, please specify type of pest of and approximate date of service	controlled, _		
34.	Water Heater Type: Gas Electr Water heater location: Basement			
	describe)	L. ∪pstairs u	tility room U,	Garage L, Other L (please
35.	What type of cooking appliance do			The state of the s
36.	Is there a stove exhaust hood prese Does it vent to the outdoors? Yes	nt? Yes 🗆 X No 🔾	No D Fan	above store in ceiling
37.	Smoking in Home: None □, Rare (only guests)□ Heavy (at least one heavy smoker i	l, M n household	oderate (reside	ents light smokers)
38.	If yes to above, what do they smok Cigarettes Cigars C Pipe C Other C			
39.	Do you regularly use air fresheners	? Yes 🕱 N	100 gla	le mister Ispan
40.	Does anyone in the home have inder Heating \square , soldering \square , welding \square wood finishing \square , Other \square Please sp	or home hol I, model glu	obies of crafts es 🔲, paint 🗀,	involving: None
41.	General family/home use of consum Never = never used, Hardly even once/month, Regularly = about one	er = less t	han once/mor	th, Occasionally = about
Produ	ct Frequency of	Use		
Spray-	on deodorant Never Ha	rdly ever	Occasionally	Regularly Often

Aero	sol deodorizers	Never	Hardly ever	Occasionally	Regularly	Often	
Insec	ticides	Never	Hardly ever	Occasionally	Regularly	Often	
Disin	fectants	Never	Hardly ever	Occasionally	Regularly	Often	
(Que: Prodi	stion 41, continued)	Frequenc	cy of Use				
Wind	low cleaners	Never	Hardly ever	Occasionally	Regularly	Often	
Spray	on oven cleaners	Never	Hardly ever	Occasionally	Regularly	Often	
Nail polish remover		Never	Hardly ever	Occasionally	Regularly	Often	
Hair s	sprays	Never	Hardly ever	Occasionally	Regularly	Often	
42.	Please check week Dusting A Dry sweeping A Vacuuming A Polishing (furnitur Washing/waxing fi Other O	e, etc) 🗖	cleaning pract	ices:			
43.	Other comments:	2					-
	*****					***********	
				***			_

OCCUPIED DWELLING QUESTIONNAIRE

Date	4/24/2011
ī.	Name:
	Address: 214 Boston Ave
	Home Phone: Work Phone:
2.	What is the best time to call to speak with you? Unu At: Work □ or Home □?
3.	Are you the Owner , Renter , Other (please specify) of this Home/Structure?
4.	Total number of occupants/persons at this location? 5 Number of children? 4 Ages? 16,13,5
5.	How long have you lived at this location? _ ~ le wws
Gene	ral Home Description
6.	Type of Home/Structure (check only one): Single Family Home , Duplex , Condominium, Townhouse, Other
7.	Home/Structure Description: number of floors
8.	Age of Home/Structure:years, Not sure/Unknown
9.	General Above-Ground Home/Structure construction (check all that apply): Wood □, Brick ☒, Concrete □, Cement block □, Other □
10.	Foundation Construction (check all that apply): Concrete slab Fieldstone Concrete block

	Elevated above ground/grade
11.	Other What is the source of your drinking water (check all that apply)?
11.	Public water supply
	Private well
	Bottled water 🔾
	Other, please specify
12.	Do you have a private well for purposes other than drinking?
	Yes □ No □
	If yes, please describe what you use the well for:
13.	Do you have a septic system? Yes □ No M Not used □ Unknown □
14.	Do you have standing water outside your home (pond, ditch, swale)? Yes \(\sigma\) No \(\sigma\)
Base	ement Description, please check appropriate boxes.
	1 ctourse 1100
15. 16,	Is the basement finished or unfinished ? If finished, how many rooms are in the basement? How many are used for more than 2 hours/day? Is the basement floor (check all that apply) concrete tile , carpeted , dirt ,
10,	How many ore used for more than 2 hours/day?
17.	Is the basement floor (check all that apply) concrete \(\mathbb{Q}\) tile \(\mathbb{Q}\), carpeted \(\mathbb{Q}\), dirt \(\mathbb{Q}\),
	other□(describe) ?
18.	Are the basement walls poured concrete \square , cement block \square , stone \square , wood \square , brick \square , other \square
19.	Does the basement have a moisture problem (check one only)?
	Yes, frequently (3 or more times/yr)
	Yes, occasionally (1-2 times/yr) □
	Yes, rarely (less than 1 time/yr) □ No X
20.	Does the basement ever flood (check one only)?
	Yes, frequently (3 or more times/yr)
	Yes, occasionally (1-2 times/yr)
	Yes, rarely (less than I time/yr)
	No □
21.	Does the basement have any of the following? (check all that apply) Floor cracks \(\Pi\),
	Wall cracks □, Sump □, Floor drain ☒, Other hole/opening in floor □
	(describė)
	(describė)

22.	Are any of the following used or stored in the basement (check all that apply) Paint Paint stripper/remover Paint thinner				
		Gasoline Diesel fuel Solvents	Glue 🗖		
		Drain cleaners ☐ Pesticides ☐			
23.	home? Yes No If yes, please specify what	was done, where in the home, and what month	ı;		
	families brass to m	inving in i remodel			
24.	Have you installed new car If yes, when and where?	pcting in your home within the last year? Yes	s□ No &		
25.	Do you regularly use or wo Yes, use dry-cleaning regul Yes, use dry-cleaning infre Yes, work at a dry cleaning No M.	quently (monthly or less)	ox)?		
26,	Does anyone in your home use solvents at work? Yes If yes, how many persons No If no, go to question 28				
27.	If yes for question 26 above	e, are the work clothes washed at home? Yes	□ No □		
28.	Where is the washer/dryer l	ocated?			
	Upstairs utility room ☐ Kitchen ☐				
	Garage 🗆				
	Use a Laundromat \Box				
	Other, please specify 🗆				
29.	If you have a dryer, is it ver	ated to the outdoors? Yes 🕱 No 🗅			
30.	What type(s) of home heating do you have (check all that apply) Fuel type: Gas A, Oil D, Electric D, Wood D, Coal D, Other				
	Heat conveyance system:	Forced hot air Forced hot water Steam Radiant floor heat Wood stove Coal furnace Fireplace Other	*		

31.	Do you have air conditioning? Yes \(\sigma\) No \(\sigma\). If yes, please check the appropriate type(s) Central air conditioning \(\sigma\) Where \(\sigma\) central bout wit usury
	Window air conditioning unit(s)☐ Other ☐, please specify
32.	Do you use any of the following? Room fans , Ceiling fans , Attic fan
	Do you ventilate using the fan-only mode of your central air conditioning or forced air heating system? Yes \(\sigma\) No \(\sigma\)
33.	Has your home had termite or other pesticide treatment: Yes \ No \ Unknown \ Unknown \ If yes, please specify type of pest controlled, unknown - budlood Sand W spraying and approximate date of service \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \
34.	Water Heater Type: Gas ☒ Electric ☐, By furnace ☐, Other ☐
	Water heater location: Basement ☒, Upstairs utility room ☐, Garage ☐, Other ☐ (please describe)
35.	What type of cooking appliance do you have? Electric □, Gas ☒, Other □
36.	Is there a stove exhaust hood present? Yes No 🗆
-0.	Does it want to the outdoors? Ves M. No D.
37.	Smoking in Home: None , Rare (only guests), Moderate (residents light smokers), Heavy (at least one heavy smoker in household)
38.	If yes to above, what do they smoke?
	Cigarettes Cigars C
	Pipe O Other O
39.	Do you regularly use air fresheners? Yes X No -
40.	Does anyone in the home have indoor home hobbies of crafts involving: None
	Heating □, soldering □, welding □, model glues □, paint □, spray paint, wood finishing □, Other □ Please specify what type of hobby:
1 1.	General family/home use of consumer products (please circle appropriate): Assume that Never = never used, Hardly ever = less than once/month, Occasionally = about
	once/month, Regularly = about once/week, and Often = more than once/week.
rodu	et Frequency of Use
pray-	on deodorant (Never) Hardly ever Occasionally Regularly Often

Aerosol deodorizers	Never	Hardly ever	Occasionally	Regularly	Often	
Insecticides	Never	Hardly ever	Occasionally	Regularly	Often	
Disinfectants	Never	Hardly ever	Occasionally	Regularly	Often	
		*				
(Question 41, continued) Product	Frequenc	cy of Use				
Window cleaners	Never	Hardly ever	Occasionally	Regularly	Often	
Spray-on oven cleaners	Never	(Hardly eve)	Occasionally	Regularly	Often	
Nail polish remover	Never	Hardly ever	Occasionally	Regularly	Often	
Hair sprays	Never	Hardly ever	Occasionally	Regularly	Often	
Please check weekly Dusting U Dry sweeping V Vacuuming U Polishing (furniture, Washing/waxing floo	etc) 📮	cleaning pract	ices:			
43. Other comments:					1-11-11-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-	
						_
					771	_
						-
			·			

Date	4-27-11
1.	Name:
	Address: 223 Boston Ave
	Home Phone: Work Phone:
2.	What is the best time to call to speak with you work At: Work or Home
3.	Are you the Owner M, Renter D, Other D (please specify) of this Home/Structure?
4.	Total number of occupants/persons at this location? 4 Number of children? 2 Ages? 18/12
5.	How long have you lived at this location? 37 years
Gene	ral Home Description
6.	Type of Home/Structure (check only one): Single Family Home X, Duplex D, Condominium D, Townhouse D, Other D
7.	Home/Structure Description: number of floors Basement? Yes No C Crawl Space? Yes No No S If Yes, under how much of the house's area?
8.	Age of Home/Structure: ** years, Not sure/Unknown **
9.	General Above-Ground Home/Structure construction (check all that apply): Wood , Brick , Concrete , Cement block , Other
10.	Foundation Construction (check all that apply): Concrete slab Fieldstone Concrete block Concrete block

	Elevated above ground/grade
	Other
11.	
	Public water supply
	Private well Pattled water
	Bottled water
	Other, please specify
12.	Do you have a private well for purposes other than drinking? Yes D No
	If yes, please describe what you use the well for:
4.0	for:
13.	Do you have a septic system? Yes □ No 🛪 Not used □ Unknown □
14.	Do you have standing water outside your home (pond, ditch, swale)? Yes 🔾 No 💢
Base	ement Description, please check appropriate boxes.
If yo	ou do not have a basement go to question 23, 11
	budwan side theath. entitlete round living room continented
15.	Is the basement finished or unfinished ? If finished, how many rooms are in the basement? How many are used for more than 2 hours/day?
16.	If finished, how many rooms are in the basement?
	How many are used for more than 2 hours/day?
17.	Is the basement floor (check all that apply) concrete , tile , carpeted , dirt , other (describe)
	other (describe) ? in which rush
18.	Are the basement walls poured concrete \square , cement block \square , stone \square , wood \square , brick \square , other \square
19.	Does the basement have a moisture problem (check one only)?
	Yes, frequently (3 or more times/yr) □
	Yes, occasionally (1-2 times/yr)
	Yes, rarely (less than 1 time/yr)
	No □
20.	Does the basement ever flood (check one only)?
	Yes, frequently (3 or more times/yr)
	Yes, occasionally (1-2 times/yr)
	Yes, rarely (less than 1 time/yr)
	No 🏂
21.	Does the basement have any of the following? (check all that apply) Floor cracks \square , Wall cracks \square , Sump \square , Floor drain \square , Other hole/opening in floor \square
	(describe) Sump pump in bedroom undernorth
	1 mily land
	Carper

My have some in stong dist Are any of the following used or stored in the basement (check all that apply) Paint thinner 🖵 Paint stripper/remover Paint 🔽 Gasoline Diesel fuel Diesel Solvents Metal degreaser/cleaner Laundry spot removers Pesticides X Drain cleaners hadspray Short. Have you recently (within the last six months) done any painting or remodeling in your 23. home? Yes \(\sigma\) No If yes, please specify what was done, where in the home, and what month: Have you installed new carpeting in your home within the last year? Yes \(\sigma\) No 24. If yes, when and where? Do you regularly use or work in a dry cleaning service (check only one box)? 25. Yes, use dry-cleaning regularly (at least weekly) Yes, use dry-cleaning infrequently (monthly or less) Yes, work at a dry cleaning service \(\bar{\pi} \) No X 26. Does anyone in your home use solvents at work? Yes If yes, how many persons No If no, go to question 28 If yes for question 26 above; are the work clothes washed at home? Yes U No U 28. Where is the washer/dryer located? Basement X Upstairs utility room \(\square\) Kitchen Q Garage 🔾 Use a Laundromat Other, please specify \(\square\) If you have a dryer, is it vented to the outdoors? Yes X No□ 29. What type(s) of home heating do you have (check all that apply) 30. Fuel type: Gas A Oil , Electric , Wood , Coal , Other Heat conveyance system: Forced hot air Forced hot water \(\quad \) Steam D Radiant floor heat Wood stove Coal furnace Fireplace Other

31.			? Yes No C	1. If yes, please	check the appropriate type(s)	
	Central air cond		/\D		, kalin otasson	w
	Window air con		(s)(_		I known of the	
32.	Other , please	of the following	na? Doom for	on Cailing for	s Attic fan 🗆	
32.					conditioning or forced air	
	heating system?	Yes D No.	-only mode o	r your central air	conditioning of forced an	
	noung by bronn.	1002 1108	~ 00	(23)	927 - 80	
33.	Has your home l	had termite or	other pesticid	e treatment: Yes	□ No Unknown □	
	If yes, please spe	cify type of p	est controlled			
	and approximate	date of service	ce			
34.	Water Heater Ty	ma: Gos X E	lectric D. Dv	furnace [] Other		
57.		pe. Oaspa, E.	iccurc a, by	iumace a, Oute		
		ation: Baseme	ent Upstair	sutility room Q	Garage Q, Other Q (please	
	describe)					
25	WI			0 E D . G	V as	
35.	What type of coo	oking appliance	ce do you have	e? Electric U, G	is A, Other	
(1)	4	f		0.2	. 1	
36.	Is there a stove e	xhaust bood r	resent? Yes	No XI Fan a	bute stre	
20,175.0	Does it vent to th	e outdoors?	Yes No 🗆	,		
37.	Smoking in Hom					
	None □, Ra				ents light smokers)□,	
	Heavy (at least or	ne heavy smo	ker in househo	old)□		
38.	If yes to above, w	what do they s	moke?			
50.	Cigarettes	Cigars C				
	Pipe 🗆	Other 🗆				
	****			10		
39.	Do you regularly	use air freshe	ners? Yes 🗆	No 🔼		
40	D	1 2022 1222		111 0 0		
40.	Does anyone in the home have indoor home hobbies of crafts involving: None \square Heating \square , soldering \square , welding \square , model glues \square , paint \square , spray paint,					
	wood finishing				spray paint,	
	wood mishing •	, Other GI rea	iso specify with	artype or nooby		
		500				
41.					appropriate): Assume that	
					th, Occasionally = about	
	once/month, Regu	ilarly = about	t once/week, a	nd Often = more	than once/week.	
Produ	ct	Frequenc	y of Use			
8033						
Spray	on deodorant	Never	Hardly ever	Occasionally	Regularly Often	

Aero	sol deodorizers	Never	Hardly ever Occasionally Regularly Often
Insec	ticides	Never	Hardly ever Occasionally Regularly Often
Disin	fectants	Never	Hardly ever Occasionally Regularly Often
(Que:	stion 41, continued)	Frequen	acy of Use
Wind	ow cleaners	Never	Hardly evor Occasionally Regularly Often
Spray	-on oven cleaners	Never (Hardly ever Occasionally Regularly Often
Nail I	oolish remover	Never	Hardly ever Occasionally Regularly Often
Hair s	sprays	Never	Hardly ever Occasionally Regularly Often
42.	Please check weekly Dusting Dry sweeping Vacuuming Polishing (furniture, Washing/waxing floo Other Other Other Other Other Other Other Other Other Other Other Other Other Other	etc)	d cleaning practices:
43.	Other comments:		
	A		

Date:	4 25 2011
1.	Name:
	Address: 227 Boston Ave
	Home Phone: Work Phone:
2.	What is the best time to call to speak with you? At: Work or Home !!
3.	Are you the Owner □, Renter ☒, Other □ (please specify) of this Home/Structure?
4.	Total number of occupants/persons at this location? 3 Number of children? 2 Ages? 15 - 12
5.	How long have you lived at this location? 3000
Gener	ral Home Description
6.	Type of Home/Structure (check only one): Single Family Home , Duplex , Condominium, Townhouse, Other
7.	Home/Structure Description: number of floors
8.	Age of Home/Structure: years, Not sure/Unknown
9.	General Above-Ground Home/Structure construction (check all that apply): Wood ☒, Brick ☒, Concrete ☒, Cement block ☒, Other ☒
10.	Foundation Construction (check all that apply): Concrete slab Fieldstone Concrete block

	Elevated above ground/grade
	Other
11.	What is the source of your drinking water (check all that apply)?
	Public water supply
	Private well 🔾
	Bottled water 🔾
	Other, please specify
	Onto, prouse specify
12.	Do you have a private well for purposes other than drinking?
	Yes □ No ¼
	If yes, please describe what you use the well
	for:
13.	Do you have a septic system? Yes \(\omega\) No \(\omega\) Not used \(\omega\) Unknown \(\omega\)
	by you have a septite system. Too a trop the association in a
14.	Do you have standing water outside your home (pond, ditch, swale)? Yes 💆 No 🗆
	ement Description, please check appropriate boxes. La collects when views SE corner of house
Base	ement Description, please check appropriate boxes.
	u do not have a basement go to question 23.
15.	Is the basement finished
16.	If finished, how many rooms are in the basement? 3
	How many are used for more than 2 hours/day? B. Is the basement floor (check all that apply) concrete A, tile A, carpeted A, dirt D,
17.	Is the basement floor (check all that apply) concrete , tile , carpeted , dirt , dirt ,
	other (describe) ?
18.	other □ (describe) ? Are the basement walls poured concrete □, cement block ⋈, stone □, wood □, brick □,
	other ?
19.	Does the basement have a moisture problem (check one only)?
	Yes, frequently (3 or more times/yr)
	Yes, occasionally (1-2 times/yr) \(\frac{\frac{1}{2}}{2}\)
	Yes, rarely (less than 1 time/yr)
	No □
20.	Does the basement ever flood (check one only)?
20.	Yes, frequently (3 or more times/yr)
	Yes, occasionally (1-2 times/yr)
	Yes, rarely (less than 1 time/yr)
	No Q
	110 100
21.	Does the basement have any of the following? (check all that apply) Floor cracks ,
	Wall cracks Ø, Sump □, Floor drain Ø, Other hole/opening in floor □
	(describe)

22.	Are any of the following used or stored in the basement (check all that apply) Paint Paint stripper/remover Paint thinner Metal degreaser/cleaner Gasoline Diesel fuel Solvents Glue Laundry spot removers Pesticides
23.	Have you recently (within the last six months) done any painting or remodeling in your home? Yes \(\Q\) No \(\overline{\Omega}\) If yes, please specify what was done, where in the home, and what month:
24.	Have you installed new carpeting in your home within the last year? Yes□ No ☒ If yes, when and where?
25.	Do you regularly use or work in a dry cleaning service (check only one box)? Yes, use dry-cleaning regularly (at least weekly) Yes, use dry-cleaning infrequently (monthly or less) Yes, work at a dry cleaning service No
26.	Does anyone in your home use solvents at work? Yes ☑ If yes, how many persons \ - m \ ~ 2x/y No □ If no, go to question 28
27.	If yes for question 26 above, are the work clothes washed at home? Yes 🗖 No 🗅
28.	Where is the washer/dryer located? Basement U Upstairs utility room U Kitchen U Garage U Use a Laundromat U Other, please specify U
29.	If you have a dryer, is it vented to the outdoors? Yes X No I
30.	What type(s) of home heating do you have (check all that apply) Fuel type: Gas , Oil , Electric , Wood , Coal , Other Heat conveyance system: Forced hot air Forced hot water Steam Radiant floor heat Wood stove Coal furnace Fireplace Other

31.	Do you have air conditioning? Yes No . If yes, please check the appropriate type(s) Central air conditioning
	Window air conditioning unit(s)□ Other □, please specify
32.	Do you use any of the following? Room fans , Ceiling fans , Attic fan Do you ventilate using the fan-only mode of your central air conditioning or forced air heating system? Yes No .
33.	Has your home had termite or other pesticide treatment: Yes \(\begin{align*} \text{No \(\text{\sqrt{M}}} \\ \text{Unknown \(\begin{align*} Unknown \(
34.	Water Heater Type: Gas ♥, Electric □, By furnace □, Other
	Water heater location: Basement Ø, Upstairs utility room □, Garage □, Other □ (please describe)
35.	What type of cooking appliance do you have? Electric , Gas , Other
36.	Is there a stove exhaust hood present? Yes ♥ No □ Does it vent to the outdoors? Yes ♥ No □
37.	Smoking in Home: None □, Rare (only guests)□, Moderate (residents light smokers)□, Heavy (at least one heavy smoker in household)□
38.	If yes to above, what do they smoke?
	Cigarettes 🗵 Cigars 🗅
	Pipe □ Other □
39.	Do you regularly use air fresheners? Yes Y No 🖸
40.	Does anyone in the home have indoor home hobbies of crafts involving: None \(\textstyle \sigma'\) Heating \(\Q\), soldering \(\Q\), welding \(\Q\), model glues \(\Q\), paint \(\Q\), spray paint, wood finishing \(\Q\), Other \(\Q\) Please specify whattype of hobby:
41.	General family/home use of consumer products (please circle appropriate): Assume that Never = never used, Hardly ever = less than once/month, Occasionally = about once/month, Regularly = about once/week, and Often = more than once/week.
Produ	ct Frequency of Use
Spray	on deodorant (Never) Hardly ever Occasionally Regularly Often

Aero	sol deodorizers	Never	Hardly ever	Occasionally	Regularly	Often
Insec	eticides	Never	Hardly ever	Occasionally	Regularly	Often
Disir	nfectants	Never	Hardly ever	Occasionally	Regularly	Often
(Que	stion 41, continued)	Frequer	ncy of Use			
Wind	low cleaners	Never	Hardly ever	Occasionally	Regularly	Often
Spray	y-on oven cleaners	Never	Hardly ever	Occasionally	Regularly	Often
Nail	polish remover	Never	Hardly ever	Occasionally	Regularly	Often
Hair :	sprays	Never	Hardly ever	Occasionally	Regularly	Often
42.	Please check week! Dusting Dry sweeping Vacuuming Polishing (furniture Washing/waxing fle	e, etc) 🗹	•	ces:		
43.	Other comments: _					
			· · · · · · · · · · · · · · · · · · ·			
			***************************************	***************************************		

Date	4/22/201
1.	Name:
	Address: 236 Boston Ave
	Home Phone: Work Phone:
2.	What is the best time to call to speak with you? any limit At: Work □ or Home □?
3.	Are you the Owner ☑, Renter □, Other □ (please specify) of this Home/Structure?
4.	Total number of occupants/persons at this location? 2 Number of children? Ages?
5.	How long have you lived at this location? ~ 20 grs
Gener	ral Home Description
6.	Type of Home/Structure (check only one): Single Family Home ♠, Duplex □, Condominium□, Townhouse □, Other □
7.	Home/Structure Description: number of floors 2 Basement? Yes No C Crawl Space? Yes No C If Yes, under how much of the house's area? 15.75%
8.	Age of Home/Structure: 1 Mult 12 W. Law 30% years, Not sure/Unknown 1
9.	General Above-Ground Home/Structure construction (check all that apply): Wood □, Brick □, Concrete □, Cement block ☒, Other □
10.	Foundation Construction (check all that apply): Concrete slab Fieldstone Concrete block

	Elevated above ground/grade Other
11.	What is the source of your drinking water (check all that apply)? Public water supply
	Private well []
	Bottled water & occassionally
	Bottled water & Occassimally Other, please specify
12.	Do you have a private well for purposes other than drinking? Yes \(\subseteq \text{ No \(\subseteq } \)
	If yes, please describe what you use the well
	for:
13.	Do you have a septic system? Yes \(\sigma\) No \(\sigma\) Not used \(\sigma\) Unknown \(\sigma\)
14.	Do you have standing water outside your home (pond, ditch, swale)? Yes O No
	ement Description, please check appropriate boxes. ou do not have a basement go to question 23.
15.	Is the basement finished ⋈ or unfinished □?
16.	If finished, how many rooms are in the basement? 3 How many are used for more than 2 hours/day? 1 - www.vow.
	How many are used for more than 2 hours/day? \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \
17.	Is the basement floor (check all that apply) concrete \(\mathbb{L}\), tile \(\mathbb{L}\), carpeted \(\mathbb{L}\), dirt \(\mathbb{L}\), other \(\mathbb{L}\)(describe)
18.	Are the basement walls poured concrete \Box , cement block \boxtimes , stone \Box , wood \Box , brick \Box , other \Box
19.	Does the basement have a moisture problem (check one only)?
	Yes, frequently (3 or more times/yr)
	Yes, occasionally (1-2 times/yr)
	Yes, rarely (less than 1 time/yr) □ No □
20.	Does the basement ever flood (check one only)? Ver frequently (2 or more times for) (0 or have a top one of the second local case).
	Yes, frequently (3 or more times/yr) \(\bar{\bar{\bar{\bar{\bar{\bar{\bar{
	Yes, rarely (less than 1 time/yr)
	No O
21.	Does the basement have any of the following? (check all that apply) Floor cracks \Box ,
	Wall cracks ♠, Sump □, Floor drain ☒, Other hole/opening in floor □
	(describe)

22.	Are any of the following used or stored in the basement (check all that apply) Paint Paint stripper/remover Paint thinner
	Metal degreaser/cleaner ☐ Gasoline ☐ Diesel fuel ☐ Solvents ☐ Glue 🛍 Laundry spot removers ☒ Drain cleaners ☐ Pesticides ☒
23.	Have you recently (within the last six months) done any painting or remodeling in your home? Yes 10 No 11 If yes, please specify what was done, where in the home, and what month: Influence the many comment (was adjustive)
24.	Have you installed new carpeting in your home within the last year? Yes □ No ⊅ If yes, when and where?
25.	Do you regularly use or work in a dry cleaning service (check only one box)? Yes, use dry-cleaning regularly (at least weekly) Yes, use dry-cleaning infrequently (monthly or less) Yes, work at a dry cleaning service No
26.	Does anyone in your home use solvents at work? Yes ☐ If yes, how many persons No ☒ If no, go to question 28
27.	If yes for question 26 above, are the work clothes washed at home? Yes \(\sigma\) No \(\sigma\)
28.	Where is the washer/dryer located? Basement Upstairs utility room Kitchen Garage Use a Laundromat Other, please specify
29.	If you have a dryer, is it vented to the outdoors? Yes P No D
30.	What type(s) of home heating do you have (check all that apply) Fuel type: Gas A, Oil , Electric , Wood , Coal , Other Heat conveyance system: Forced hot air Forced hot water Steam Radiant floor heat Wood stove Call Call Call Call Call Call Call Cal

31.	Do you have air conditioning? Yes \(\bar{\pi}\) No \(\bar{\pi}\). If yes, please check the appropriate type(s) Central air conditioning \(\bar{\pi}\)					
	Window air conditioning unit(s)					
	Other , please specify					
32.	Do you use any of the following? Room fans, Ceiling fans, Attic fan Do you ventilate using the fan-only mode of your central air conditioning or forced air heating system? Yes No (4)					
33.	Has your home had termite or other pesticide treatment: Yes D No V Unknown D					
	If yes, please specify type of pest controlled, one up until 2 yes and approximate date of service					
34.	Water Heater Type: Gas □, Electric □, By furnace ☒, Other					
	Water heater location: Basement ☑, Upstairs utility room □, Garage □, Other □ (please describe)					
35.	What type of cooking appliance do you have? Electric ♠, Gas □, Other □					
36.	Is there a stove exhaust hood present? Yes \(\sigma\) No \(\sigma\)					
	Does it vent to the outdoors? Yes \(\sigma\) No \(\sigma\)					
37.	Smoking in Home: None □, Rare (only guests)□, Moderate (residents light smokers)♥,					
	Heavy (at least one heavy smoker in household)□					
38.	If yes to above, what do they smoke?					
	Cigarettes Cigars					
	Pipe Other .					
39.	Do you regularly use air fresheners? Yes No O					
40.						
	Does anyone in the horse have indoor home hobbies of crafts involving: None Heating , soldering , welding , model glues , paint , spray paint, wood finishing , Other Please specify what type of hobby:					
41.	General family/home use of consumer products (please circle appropriate): Assume that					
	Never = never used, Hardly ever = less than once/month, Occasionally = about					
	once/month, Regularly = about once/week, and Often = more than once/week.					
Produ	Frequency of Use					
a	The distance of the Control of the C					
Spray	on deodorant (Never Hardly ever Occasionally Regularly Often					

Aero	sol deodorizers	Never	Hardly ever	Occasionally	Regularly	(Often)
Insec	ticides	Never	Hardly ever	Occasionally	Regularly	Often
Disin	fectants	Never	Hardly ever	Occasionally	Regularly	Often
(Question 41, continued) Product		Frequenc	cy of Use			
Wind	ow cleaners	Never	Hardly ever	Occasionally	Regularly	Often
Spray	on oven cleaners	Never	Hardly ever	Occasionally	Regularly	Often
Nail p	oolish remover	Never (Hardly ever	Occasionally	Regularly	Often
Hair sprays		Never	Hardly ever	Occasionally	Regularly	Often
42.	Please check week Dusting A Dry sweeping A Vacuuming A Polishing (furniture Washing/waxing fl Other A	e, etc) 🛛	cleaning pract	ices:		
43.	Other comments:	****			m.s	
				****		M.12.
						100 100

-Date	4-27-11
1.	Name:
	Address: 239 Boston Ave.
	Home Phone: Work Phone:
2.	What is the best time to call to speak with you? More At: Work or Home ?
3.	Are you the Owner A, Renter Q, Other Q (please specify) of this Home/Structure?
4.	Total number of occupants/persons at this location?
5.	How long have you lived at this location? 10 4005
Gene	ral Home Description
6.	Type of Home/Structure (check only one): Single Family Home ★, Duplex □, Condominium□, Townhouse□, Other □
7.	Home/Structure Description: number of floors Basement? Yes X No C Crawl Space? Yes No X If Yes, under how much of the house's area?%
8.	Age of Home/Structure; years, Not sure/Unknown
9.	General Above-Ground Home/Structure construction (check all that apply): Wood □, Brick □, Concrete □, Cement block □, Other □
10.	Foundation Construction (check all that apply): Concrete slab Fieldstone Concrete block

	Elevated above ground/grade U Other
11.	What is the source of your drinking water (check all that apply)?
	Public water supply
	Private well
	Bottled water
	Other, please specify
12.	Do you have a private well for purposes other than drinking? Yes \(\sigma\) No \(\sigma\)
	If yes, please describe what you use the well for:
13.	Do you have a septic system? Yes □ NoX Not used □ Unknown □
14.	Do you have standing water outside your home (pond, ditch, swale)? Yes O No
	ement Description, please check appropriate boxes. u do not have a basement go to question 23.
15.	Is the basement finished or unfinished ?
16.	If finished, how many rooms are in the basement? How many are used for more than 2 hours/day? May be washing
	How many are used for more than 2 hours/day?
17.	Is the basement floor (check all that apply) concrete ; tile , carpeted , dirt ,
18.	other (describe) ? Are the basement walls poured concrete , cement block stone , wood , brick , other ?
19.	Does the basement have a moisture problem (check one only)?
	Yes, frequently (3 or more times/yr)
	Yes, occasionally (1-2 times/yr)
	Yes, rarely (less than 1 time/yr) X No 🔾
20.	Does the basement ever flood (check one only)?
	Yes, frequently (3 or more times/yr)
	Yes, occasionally (1-2 times/yr) Q
	Yes, rarely (less than 1 time/yr)
	No X
21.	Does the basement have any of the following? (check all that apply) Floor cracks .
	Wall cracks , Sump , Floor drain Other hole/opening in floor
	Wall cracks , Sump , Floor drain Other hole/opening in floor (describe)

22.	Are any of the following used or stored in the basement (check all that apply)					
		er/remover Paint thinner Solvents Glue Glue				
	Metal degreaser/cleaner					
	Laundry spot removers	Drain cleaners Pesticides				
22	spray bastile	the last six months) done any painting or remodeling in your				
23.	Have you recently (within	the tast six months) done any painting or remodeling in your				
	home? Yes No	was done where in the hame, and what month:				
	If yes, please specify what	was done, where in the home, and what month:				
24	Have your bestelled new one	meting in your home within the last year? Ves [] Now				
24.	If yes, when and where?	peting in your home within the last year? Yes \(\sigma\) No \(\infty\)				
	If yes, when and where!					
25.	Do you regularly use or wo	ork in a dry cleaning service (check only one box)?				
	Yes, use dry-cleaning regul					
	Yes, use dry-cleaning infre	quently (monthly or less)				
	Yeş, work at a dry cleaning	service 🔾				
	No 🗶					
26.	Does anyone in your home	use solvents at work?				
20.	Yes \(\sigma\) If yes, how many pe					
	No If no, go to question	28				
	[, 5]					
27.	If yes for question 26 above	e, are the work clothes washed at home? Yes 🔾 No 🔾				
28.	Where is the washer/dryer l	incated?				
20,	Basement W	ocated:				
	Upstairs utility room					
	Kitchen 🗆					
	Garage 🗆	19				
	Use a Laundromat					
	Other, please specify					
	Other, prease specify \Box					
29.	If you have a dryer, is it ver	nted to the outdoors? Yes No 🗆				
30.	What type(s) of home heating	ng do you have (check all that apply)				
	Fuel type: Gas KOil Q, E	lectric □, Wood □, Coal □, Other				
	Heat conveyance system:	Forced hot air				
		Forced hot water \Box				
		Steam 🗆				
25	r L	Radiant floor heat				
. 1/2	start him	Wood stove □				
U.	, ,	Coal furnace				
	statum Luma	Fireplace Q				
	TWW.	Other				
		No. (September 1997)				

31.	Do you have air conditioning? Yes No . If yes, please check the appropriate type(s) Central air conditioning .
	Window air conditioning unit(s) (S) (Other , please specify
32.	Do you use any of the following? Room fans . Ceiling fans Attic fan Do you ventilate using the fan-only mode of your central air conditioning or forced air heating system? Yes No
33.	Has your home had termite or other pesticide treatment: Yes No Unknown If yes, please specify type of pest controlled, from and approximate date of service Square
34.	Water Heater Type: Gas ★ Electric □, By furnace □, Other □
	Water heater location: Basement ■, Upstairs utility room □, Garage □, Other □ (please describe)
35.	What type of cooking appliance do you have? Electric □, Gas A Other □
36.	Is there a stove exhaust hood present? Yes No Does it vent to the outdoors? Yes No D
37.	Smoking in Home: None Rare (only guests)□, Moderate (residents light smokers)□, Heavy (at least one heavy smoker in household)□
38.	If yes to above, what do they smoke? Cigarettes Other Other
39.	Do you regularly use air fresheners? Yes \(\mathbb{O}\) No \(\mathbb{O}\) \(\mathbb{O}\) \(\mathbb{O}\) \(\mathbb{O}\)
40.	Does anyone in the home have indoor home hobbies of crafts involving: None Kenting , soldering , welding , model glues , paint , spray paint, wood finishing , Other Please specify whattype of hobby:
41.	General family/home use of consumer products (please circle appropriate): Assume that Never = never used, Hardly ever = less than once/month, Occasionally = about once/month, Regularly = about once/week, and Often = more than once/week.
Produc	t Frequency of Use
Spray-c	on deodorant Never Hardly ever Occasionally Regularly Often

Aerosol deodorizers	Never	Hardly ever	Occasionall	Regularly	Often	
Insecticides	Never	Hardly ever	Occasionally	Regularly	Often	
Disinfectants	Never	Hardly ever	Occasionally	Regularly	Often	
(Question 41, continued) Product	Freguen	cy of Use				
Window cleaners	Never	Hardly ever	Occasionally (Regularly	Often	
Spray-on oven cleaners	Never	Hardly ever	Occasionally	Regularly	Often	
Nail polish remover	Never	Hardly ever	Occasionally	Regularly	Often	
Hair sprays	Never	Hardly ever	Occasionally	Regularly	Often	
Please check week Dusting Dry sweeping Vacuuming Polishing (furnitur Washing/waxing flother Other	e, etc)	l cleaning pract	ices:			
43. Other comments: _			10 y 10 m 1 m 1 m 1 m 1 m 1 m 1 m 1 m 1 m 1			
						-
						-
w w 0				W 100 - 2 - 1		
			***			-

Date:	4/24/2011
1.	Name:
	Address: 240 Boston Ave
	Home Phone Work Phone:
2.	What is the best time to call to speak with you? <u>aw</u> At: Work □ or Home □?
3.	Are you the Owner ☒, Renter □, Other □ (please specify) of this Home/Structure?
4.	Number of occupants/persons at this location? 2 Number of children? Ages? Description with the second dealy basis
5.	How long have you lived at this location?
Gener	al Home Description
6.	Type of Home/Structure (check only one): Single Family Home A, Duplex Q, CondominiumQ, Townhouse Q, Other Q
7.	Home/Structure Description: number of floors 2. Basement? Yes No Compared No
8.	Age of Home/Structure: ~100 years, Not sure/Unknown •
	General Above-Ground Home/Structure construction (check all that apply): Wood ♥, Brick □, Concrete □, Cement block □, Other □
	Foundation Construction (check all that apply): Concrete slab Fieldstone Concrete block Concrete block

	Elevated above ground/grade Other
11.	What is the source of your drinking water (check all that apply)? Public water supply
	Private well
	Bottled water
	Other, please specify
12.	Do you have a private well for purposes other than drinking? Yes No X
	If yes, please describe what you use the well for:
13.	Do you have a septic system? Yes D No Not used D Unknown D
14.	Do you have standing water outside your home (pond, ditch, swale)? Yes □ No ◘
	ement Description, please check appropriate boxes. Su do not have a basement go to question 23.
15.	Is the basement finished or unfinished 2?
16.	If finished, how many rooms are in the basement?
	How many are used for more than 2 hours/day?
17.	Is the basement floor (check all that apply) concrete ⊠, tile □, carpeted □, dirt □, other □ (describe)?
18.	other □ (describe)? Are the basement walls poured concrete □, cement block ☒, stone □, wood □, brick □, other □?
19.	Does the basement have a moisture problem (check one only)? Yes, frequently (3 or more times/yr) Yes, occasionally (1-2 times/yr)
	Yes, rarely (less than 1 time/yr) □ No □
20.	Does the basement ever flood (check one only)? Yes, frequently (3 or more times/yr)
	Yes, occasionally (1-2 times/yr)
	Yes, rarely (less than 1 time/yr)
	N.D.
) 1	Dogs the becoment have any of the following? (sheets all that and b) Flore and Market
21.	Does the basement have any of the following? (check all that apply) Floor cracks \(\mathbb{\text{A}}\), Wall cracks \(\mathbb{\text{A}}\), Sump \(\mathbb{\text{A}}\), Floor drain \(\mathbb{\text{A}}\), Other hole/opening in floor \(\mathbb{\text{A}}\) (describe)

22.	Are any of the following used or stored in the basement (check all that apply) Paint Paint stripper/remover Paint thinner Paint					
	Metal degreaser/cleaner ☐ Gasoline ☐ Diesel fuel ☐ Solvents ☐ Glue ☐					
	Laundry spot removers ♥ Drain cleaners □ Pesticides □					
23.	Have you recently (within the last six months) done any painting or remodeling in you home? Yes in No in If yes, please specify what was done, where in the home, and what month:	r				
	3					
24.	Have you installed new carpeting in your home within the last year? Yes □ No ☐ If yes, when and where?					
25.	Do you regularly use or work in a dry cleaning service (check only one box)? Yes, use dry-cleaning regularly (at least weekly) Yes, use dry-cleaning infrequently (monthly or less) Yes, work at a dry cleaning service No					
26,	Does anyone in your home use solvents at work? Yes If yes, how many persons No II Ino, go to question 28 - not any more					
27.	If yes for question 26 above, are the work clothes washed at home? Yes \(\Quad \text{No } \Quad \text{No } \Quad					
28.	Where is the washer/dryer located? Basement Upstairs utility room U					
	Kitchen □ Garage □					
	Use a Laundromat					
	Other, please specify \square					
29,	If you have a dryer, is it vented to the outdoors? Yes ☒ No □					
30.	What type(s) of home heating do you have (check all that apply) Fuel type: Gas \(\overline{\Omega}\), Oil \(\overline{\Omega}\), Electric \(\overline{\Omega}\), Wood \(\overline{\Omega}\), Coal \(\overline{\Omega}\), Other					
	Heat conveyance system: Forced hot air □ Forced hot water □ Steam □ Radiant floor heat □ Wood stove □ Coal furnace □ Fireplace □ Other					

31.	Do you have air conditioning? Yes ⋈ No □. If yes, please check the appropriate type(s) Central air conditioning □ Window air conditioning unit(s) ⋈
	Other Q, please specify
32.	Do you use any of the following? Room fans . Ceiling fans . Attic fan . Do you ventilate using the fan-only mode of your central air conditioning or forced air heating system? Yes . No .
33.	Has your home had termite or other pesticide treatment: Yes \(\sigma\) No \(\sigma\) Unknown \(\sigma\) If yes, please specify type of pest controlled,
	and approximate date of service
34.	Water Heater Type: Gas ♥, Electric □, By furnace □, Other
	Water heater location: Basement \(\overline{\
35.	What type of cooking appliance do you have? Electric Gas □, Other
36.	Is there a stove exhaust hood present? Yes □ No ☒ Does it vent to the outdoors? Yes □ No □
37.	Smoking in Home: None , Rare (only guests), Moderate (residents light smokers), Heavy (at least one heavy smoker in household)
38.	If yes to above, what do they smoke? Cigarettes Cigars A
39.	Do you regularly use air fresheners? Yes \(\sigma\) No \(\sigma\) very very very \(\sigma\)
40.	Does anyone in the home have indoor home hobbies of crafts involving: None \(\begin{align*} \Pi \) Heating \(\beta\), soldering \(\beta\), welding \(\beta\), model glues \(\beta\), paint \(\beta\), spray paint, wood finishing \(\beta\), Other \(\beta\) Please specify what type of hobby:
41.	General family/home use of consumer products (please circle appropriate): Assume that Never = never used, Hardly ever = less than once/month, Occasionally = about once/month, Regularly = about once/week, and Often = more than once/week.
Dua da	
Produ	ct Frequency of Use
Spray-	on deodorant Never Hardly ever Occasionally Regularly Often

Aerosol deodorizers		Never	Hardly ever	Occasionally	Regularly	Often
Insecti	cides	Never	Hardly ever	Occasionally	Regularly	Often
Disinfe	ectants	Never	Hardly ever	Occasionally	Regularly (Often
(Quest	ion 41, continued)	Frequen	cy of Use		A100	
Windo	w cleaners	Never	Hardly ever	Occasionally	Regularly	Often
Spray-	on oven cleaners	Never	Hardly ever	Occasionally	Regularly	Often
Nail po	olish remover	Never	Hardly ever	Occasionally	Regularly	Often
Hair sp	rays	Never	Hardly ever	Occasionally	Regularly	Often
	Please check week Dusting (A) Dry sweeping (A) Vacuuming (A) Polishing (furnitur Washing/waxing fi Other (1)	e, etc) 🗖	55	ces:	is a	
43.	Other comments: _		451 - 4 20 - 1 40			
		25 SZ W223				
				** ***********************************		Total Sivers
			**			***

Date:	4/25/11
1.	Name:
1.	
	Address: 302 Boston Ave Geda Waterlos, Zona 50703
	Lede Vaterios, Lova 50703
	Home Phone: Work Phone:
2.	What is the best time to call to speak with you? 8-11 At: Work □ or Home ★?
3.,	Are you the Owner, Renter , Other (please specify) of this Home/Structure?
4.	Total number of occupants/persons at this location? Ages?
5.	How long have you lived at this location?
Gene	al Home Description
6.	Type of Home/Structure (check only one): Single Family Home ⋈, Duplex □, Condominium □, Townhouse □, Other □
7.	Home/Structure Description: number of floors
8.	Age of Home/Structure: ~ 1950 years, Not sure/Unknown □
9.	General Above-Ground Home/Structure construction (check all that apply): Wood A, Brick D, Concrete D, Cement block D, Other D
10.	Foundation Construction (check all that apply): Concrete slab A Fieldstone Concrete block

Public water supply Private well Department of the private well for purposes other than drinking? 12. Do you have a private well for purposes other than drinking? Yes Do No Department of the purposes other than drinking? Yes Do No Department of the well for: 13. Do you have a septic system? Yes Do No Department of the well for: 14. Do you have standing water outside your home (pond, ditch, swale)? Yes Do Department of the private of the privat		11	Elevated above ground/grade Other What is the second of the delication water (check all that apply)?
Private well Bottled water Dother, please specify 12. Do you have a private well for purposes other than drinking? Yes No Yes Yes No Yes No Yes Yes, frequently (3 or more times/yr) Yes, occasionally (1-2		11.	What is the source of your drinking water (check all that apply)?
Bottled water Other, please specify 12. Do you have a private well for purposes other than drinking? Yes Now If yes, please describe what you use the well for: 13. Do you have a septic system? Yes Now Not used Unknown 14. Do you have standing water outside your home (pond, ditch, swale)? Yes Now Spengh heart Storms on Sideral II Basement Description, please check appropriate boxes. If you do not have a basement go to question 23. 15. Is the basement finished or unfinished ? Parkelly finished. 16. If finished, how many rooms are in the basement? — How many are used for more than 2 hours/day? —— How many are used for more than 2 hours/day? —— 17. Is the basement floor (check all that apply) concrete in the position other (describe). 18. Are the basement walls poured concrete in the check one only)? Yes, frequently (3 or more times/yr) —— Yes, occasionally (1-2 times/yr) —— Yes, rarely (less than 1 time/yr) —— Yes, occasionally (1-2 times/yr) —— Yes, occasionally (1-2 times/yr) — Yes, prarely (less than 1 time/yr) — Yes, occasionally (1-2 times/yr) — Yes, occasionally (1-2 times/			
Other, please specify 12. Do you have a private well for purposes other than drinking? Yes \(\) No \(\) If yes, please describe what you use the well for: 13. Do you have a septic system? Yes \(\) No \(\) Not used \(\) Unknown \(\) 14. Do you have standing water outside your home (pond, ditch, swale)? Yes \(\) No \(\) \$\int \(\			
If yes, please describe what you use the well for: 13. Do you have a septic system? Yes \(\) No \(\) Not used \(\) Unknown \(\) 14. Do you have standing water outside your home (pond, ditch, swale)? Yes \(\) No \(\) \$\sigma_{point} heary \(s \) to find \(s \) on Sideral II Basement Description, please check appropriate boxes. If you do not have a basement go to question 23. 15. Is the basement finished \(\) or unfinished \(\)? Parkally finished 16. If finished, how many rooms are in the basement? How many are used for more than 2 hours/day? 17. Is the basement floor (check all that apply) concrete \(\), tile \(\), carpeted \(\), din other\(\) (describe) 18. Are the basement walls poured concrete \(\), cement block \(\), stone \(\), wood \(\), brice other\(\) 19. Does the basement have a moisture problem (check one only)? Yes, frequently (3 or more times/yr) \(\) \(\) Yes, cassionally (1-2 times/yr) \(\) \(\) \(\) Yes, frequently (3 or more times/yr) \(\) \(\) Yes, frequently (3 or more times/yr) \(\) \(\) Yes, gocasionally (1-2 times/yr) \(\) \(\) Yes, grarely (less than 1 time/yr) \(\) \(\)			
13. Do you have a septic system? Yes \(\) No\(\) Not used \(\) Unknown \(\) 14. Do you have standing water outside your home (pond, ditch, swale)? Yes \(\) No\(\) 15. Basement Description, please check appropriate boxes. 16. If finished, how many rooms are in the basement? 17. Is the basement floor (check all that apply) concrete \(\), tile \(\), carpeted \(\), directly other\(\) (describe) 18. Are the basement walls poured concrete \(\), cement block \(\), stone \(\), wood \(\), brid other\(\) 19. Does the basement have a moisture problem (check one only)? Yes, frequently (3 or more times/yr) \(\) Yes, cassionally (1-2 times/yr) \(\) Yes, rarely (less than 1 time/yr) \(\) 20. Does the basement ever flood (check one only)? Yes, frequently (3 or more times/yr) \(\) Yes, occasionally (1-2 times/yr) \(\) Yes, cassionally (1-2 times/yr) \(\) Yes, rarely (less than 1 time/yr) \(\) No\(\) 21. Does the basement have any of the following? (check all that apply) Floor cracks \(\) Wall cracks \(\), Sump \(\), Floor drain \(\), Other hole/opening in floor \(\)		12.	Yes No No
Basement Description, please check appropriate boxes. If you do not have a basement go to question 23. 15. Is the basement finished or unfinished parkilly finished. 16. If finished, how many rooms are in the basement? How many are used for more than 2 hours/day? 17. Is the basement floor (check all that apply) concrete to ther other other of the basement walls poured concrete to the concept of the pour of the same of the basement have a moisture problem (check one only)? 18. Are the basement have a moisture problem (check one only)? Yes, frequently (3 or more times/yr) to yes, occasionally (1-2 times/yr) to yes, rarely (less than 1 time/yr) to yes, occasionally (1-2 times/yr) to yes, occasionally (
Basement Description, please check appropriate boxes. If you do not have a basement go to question 23. 15. Is the basement finished or unfinished ? Parkelly finished. 16. If finished, how many rooms are in the basement?		13.	Do you have a septic system? Yes □ No Not used □ Unknown □
Basement Description, please check appropriate boxes. If you do not have a basement go to question 23. 15. Is the basement finished or unfinished ? Parkelly finished. 16. If finished, how many rooms are in the basement?		14.	Do you have standing water outside your home (pond, ditch, swale)? Yes No O
If you do not have a basement go to question 23. 15. Is the basement finished or unfinished □? Parkally finished. 16. If finished, how many rooms are in the basement? Z How many are used for more than 2 hours/day? I 17. Is the basement floor (check all that apply) concrete v, tile □, carpeted □, directory other□ (describe) 18. Are the basement walls poured concrete v, cement block □, stone □, wood □, brick other□ 19. Does the basement have a moisture problem (check one only)? Yes, frequently (3 or more times/yr) □ Yes, occasionally (1-2 times/yr) □ Yes, rarely (less than 1 time/yr) □ Yes, frequently (3 or more times/yr) □ Yes, occasionally (1-2 times/yr) □ Yes, occasionally (1-2 times/yr) □ Yes, rarely (less than 1 time/yr) □ No v 21. Does the basement have any of the following? (check all that apply) Floor cracks □ Wall cracks v, Sump □, Floor drain v, Other hole/opening in floor □		Base	ment Description, please check appropriate boxes.
How many are used for more than 2 hours/day? Is the basement floor (check all that apply) concrete , tile , carpeted , dir other (describe) ? 18. Are the basement walls poured concrete , cement block , stone , wood , brice other 19. Does the basement have a moisture problem (check one only)? Yes, frequently (3 or more times/yr) Yes, occasionally (1-2 times/yr) Yes, rarely (less than 1 time/yr) 20. Does the basement ever flood (check one only)? Yes, frequently (3 or more times/yr) Yes, occasionally (1-2 times/yr) Yes, occasionally (1-2 times/yr) Yes, occasionally (1-2 times/yr) Yes, rarely (less than 1 time/yr) No 21. Does the basement have any of the following? (check all that apply) Floor cracks Wall cracks , Sump , Floor drain , Other hole/opening in floor Wall cracks , Sump , Floor drain , Other hole/opening in floor Other Other Yes, tile , carpeted , dir other , tile			
How many are used for more than 2 hours/day? Is the basement floor (check all that apply) concrete , tile , carpeted , dir other (describe) ? 18. Are the basement walls poured concrete , cement block , stone , wood , brice other 19. Does the basement have a moisture problem (check one only)? Yes, frequently (3 or more times/yr) Yes, occasionally (1-2 times/yr) Yes, rarely (less than 1 time/yr) 20. Does the basement ever flood (check one only)? Yes, frequently (3 or more times/yr) Yes, occasionally (1-2 times/yr) Yes, occasionally (1-2 times/yr) Yes, occasionally (1-2 times/yr) Yes, rarely (less than 1 time/yr) No 21. Does the basement have any of the following? (check all that apply) Floor cracks Wall cracks , Sump , Floor drain , Other hole/opening in floor Wall cracks , Sump , Floor drain , Other hole/opening in floor Other Other Yes, tile , carpeted , dir other , tile		15.	Is the basement finished \(\mathbb{A}\) or unfinished \(\mathbb{Q}\)? \(\rho^{ar}\)
17. Is the basement floor (check all that apply) concrete ⋈, tile □, carpeted □, dir other□(describe) ? 18. Are the basement walls poured concrete ⋈, cement block □, stone □, wood □, brick other□ ? 19. Does the basement have a moisture problem (check one only)? Yes, frequently (3 or more times/yr) □ Yes, occasionally (1-2 times/yr) □ Yes, rarely (less than 1 time/yr) ⋈ Cleptor on how bad: + tar No □ 20. Does the basement ever flood (check one only)? Yes, frequently (3 or more times/yr) □ Yes, occasionally (1-2 times/yr) □ Yes, occasionally (1-2 times/yr) □ Yes, rarely (less than 1 time/yr) □ No ⋈ 21. Does the basement have any of the following? (check all that apply) Floor cracks □ Wall cracks ⋈, Sump □, Floor drain ⋈, Other hole/opening in floor □		16.	
other □ (describe) ? 18. Are the basement walls poured concrete , cement block □, stone □, wood □, brick other □ ? 19. Does the basement have a moisture problem (check one only)? Yes, frequently (3 or more times/yr) □ Yes, occasionally (1-2 times/yr) □ Clefterd's on how bad: + race Yes, rarely (less than 1 time/yr) ☒ Clefterd's on how bad: + race Yes, frequently (3 or more times/yr) □ Yes, occasionally (1-2 times/yr) □ Yes, occasionally (1-2 times/yr) □ Yes, rarely (less than 1 time/yr) □ No ☒ 21. Does the basement have any of the following? (check all that apply) Floor cracks □ Wall cracks ☒, Sump □, Floor drain ☒, Other hole/opening in floor □			
other□ ? 19. Does the basement have a moisture problem (check one only)? Yes, frequently (3 or more times/yr) □ Yes, occasionally (1-2 times/yr) □ Yes, rarely (less than 1 time/yr) ☒ Clefterds on how bad: + tar No □ 20. Does the basement ever flood (check one only)? Yes, frequently (3 or more times/yr) □ Yes, occasionally (1-2 times/yr) □ Yes, varely (less than 1 time/yr) □ No ☒ 21. Does the basement have any of the following? (check all that apply) Floor cracks □ Wall cracks ☒, Sump □, Floor drain ☒, Other hole/opening in floor □		17.	other (describe) ?
Yes, frequently (3 or more times/yr) \(\subseteq \text{Yes, occasionally (1-2 times/yr)} \) \(\subseteq \text{Copends} \) on how \(\subseteq \text{Sed} : \text{-tackyes, rarely (less than 1 time/yr)} \) \(\subseteq \text{Copends} \) on how \(\subseteq \text{Sed} : \text{-tackyes} \) \(\subseteq \text{No} \) \(\subseteq \text{Ves, frequently (3 or more times/yr)} \) \(\subseteq \text{Yes, occasionally (1-2 times/yr)} \) \(\subseteq \text{Yes, rarely (less than 1 time/yr)} \) \(\subseteq \text{No} \) \(\subseteq \text{No} \) \(\subseteq \text{No} \) \(\subseteq \text{Normal time/yr)} \(\subseteq \text{Normal time/yr)} \) \(\subseteq \text{Normal time/yr)} \(\subseteq \text{Normal time/yr)} \) \(\subseteq \text{Normal time/yr)} \) \(\subseteq \text{Normal time/yr)} \) \(\subseteq \text{Normal time/yr)} \(\subseteq \text{Normal time/yr)} \) \(\subseteq \text{Normal time/yr)} \) \(\subseteq \text{Normal time/yr)} \(\subseteq \text{Normal time/yr)} \) \(\subseteq \text{Normal time/yr)} \) \(\subseteq \text{Normal time/yr)} \) \(\subseteq \text{Normal time/yr)} \(\subseteq \text{Normal time/yr)} \) \(\subseteq \text{Normal time/yr)} \(\subseteq \text{Normal time/yr)} \) \(\subseteq \text{Normal time/yr)} \(\subseteq \text{Normal time/yr)} \) \(\subseteq \text{Normal time/yr)} \) \(\subseteq \text{Normal time/yr)} \) \(\subseteq		18.	
Yes, occasionally (1-2 times/yr) Clefferds on how Seed: The Yes, rarely (less than 1 time/yr) Clefferds on how Seed: The Yes, rarely (less than 1 time/yr) Property of the basement ever flood (check one only)? Yes, frequently (3 or more times/yr) Yes, occasionally (1-2 times/yr) Yes, rarely (less than 1 time/yr) No		19.	Does the basement have a moisture problem (check one only)?
20. Does the basement ever flood (check one only)? Yes, frequently (3 or more times/yr) \(\subseteq\) Yes, occasionally (1-2 times/yr) \(\supseteq\) Yes, rarely (less than 1 time/yr) \(\supseteq\) No \(\supseteq\) 21. Does the basement have any of the following? (check all that apply) Floor cracks \(\supseteq\) Wall cracks \(\supseteq\), Sump \(\supseteq\), Floor drain \(\supseteq\), Other hole/opening in floor \(\supseteq\)			Yes, frequently (3 or more times/yr)
20. Does the basement ever flood (check one only)? Yes, frequently (3 or more times/yr) \(\subseteq\) Yes, occasionally (1-2 times/yr) \(\supseteq\) Yes, rarely (less than 1 time/yr) \(\supseteq\) No \(\supseteq\) 21. Does the basement have any of the following? (check all that apply) Floor cracks \(\supseteq\) Wall cracks \(\supseteq\), Sump \(\supseteq\), Floor drain \(\supseteq\), Other hole/opening in floor \(\supseteq\)			Yes, occasionally (1-2 times/yr)
 Does the basement ever flood (check one only)? Yes, frequently (3 or more times/yr) □ Yes, occasionally (1-2 times/yr) □ Yes, rarely (less than 1 time/yr) □ No ■ Does the basement have any of the following? (check all that apply) Floor cracks □ Wall cracks ■, Sump □, Floor drain ■, Other hole/opening in floor □ 			Yes, rarely (less than I time/yr) (repeat)
Yes, frequently (3 or more times/yr) \(\sigma\) Yes, occasionally (1-2 times/yr) \(\sigma\) Yes, rarely (less than 1 time/yr) \(\sigma\) No \(\sigma\) 21. Does the basement have any of the following? (check all that apply) Floor cracks \(\sigma\) Wall cracks \(\sigma\), Sump \(\sigma\), Floor drain \(\sigma\), Other hole/opening in floor \(\sigma\)			
Yes, occasionally (1-2 times/yr) \(\sigma\) Yes, rarely (less than 1 time/yr) \(\sigma\) No \(\sigma\) 21. Does the basement have any of the following? (check all that apply) Floor cracks \(\sigma\) Wall cracks \(\sigma\), Sump \(\sigma\), Floor drain \(\sigma\), Other hole/opening in floor \(\sigma\)		20.	
Yes, rarely (less than 1 time/yr) \(\sigma\) No \(\mathbb{A}\) 21. Does the basement have any of the following? (check all that apply) Floor cracks \(\sigma\) Wall cracks \(\mathbb{A}\), Sump \(\sigma\), Floor drain \(\mathbb{A}\), Other hole/opening in floor \(\sigma\)		1	
No No No No No No No No			
Wall cracks M, Sump □, Floor drain M, Other hole/opening in floor □			
Har dan by fames H-6			
Alor draw by Furnica H-6	wa	Il cra	its covered by paneling
	An	r de	and by farmed H-6

22.		sed or stored in the basement (check all that apply) er/remover Paint thinner
	Metal degreaser/cleaner	Gasoline Diesel fuel Solvents Glue
	Laundry spot removers	Konce in a while dips (heating oil)
	011 440	Roncein aunitedition ("earing oil)
23.	home? Yes \(\overline{\ove	the last six months) done any painting or remodeling in your
40		was done, where in the home, and what month:
	yoo, picase speerly what	*
24	TT	rpeting in your home within the last year? Yes \(\sigma\) No
24.		rpeting in your nome within the last year? Tes 1 1004
25.	Do you rocularly you or we	ork in a dry cleaning service (check only one box)?
43.	Yes, use dry-cleaning regu	
		equently (monthly or less)
	Yes, work at a dry cleaning	
	No 🗷	
26.	Does anyone in your home	
	Yes If yes, how many po	
	No If no, go to question	28
27.	If yes for question 26 abov	e, are the work clothes washed at home? Yes - No -
28.	Where is the washer/dryer	located?
	Basement X	
	Upstairs utility room 🗖	
	Kitchen 🗆	
	Garage ☐ Use a Laundromat ☐	
	Other, please specify	
	Outer, piedao apoemy -	
29.	If you have a dryer, is it ve	nted to the outdoors? Yes 🔏 No 🗖
30.	What type(s) of home heati	ng do you have (check all that apply)
	Fuel type: Gas □, Oil □, E	lectric , Wood , Coal , Other Natura Gas
	Heat conveyance system:	
		Forced hot water \\
		Steam Radiant floor heat
		Forced hot air A Forced hot water Steam Radiant floor heat Wood stove Neathing of tank air Neathing of tank air Neathing of tank air Neathing of tank air
		Coal furnace
		Fireplace
		Other

31.	Do you have air conditioning? Yes No . If yes, please check the appropriate type(s) Central air conditioning
	Window air conditioning unit(s)□ Other □, please specify
32.	Do you use any of the following? Room fans , Ceiling fans , Attic fan Do you ventilate using the fan-only mode of your central air conditioning or forced air heating system? Yes No No Not very offen
33.	Has your home had termite or other pesticide treatment: Yes \(\sigma\) No\(\sigma\) Unknown \(\sigma\) If yes, please specify type of pest controlled, and approximate date of service
34.	Water Heater Type: Gas , Electric , By furnace , Other Water heater location: Basement , Upstairs utility room , Garage , Other (please describe)
35.	What type of cooking appliance do you have? Electric ▲ Gas □, Other □
36.	Is there a stove exhaust hood present? Yes No Does it vent to the outdoors? Yes No D
37.	Smoking in Home: None \(\mathbb{O} \), Rare (only guests)\(\mathbb{O} \), Moderate (residents light smokers)\(\mathbb{O} \), Heavy (at least one heavy smoker in household)\(\mathbb{O} \)
38.	If yes to above, what do they smoke? Cigarettes Other Other
39.	Do you regularly use air fresheners? Yes No 🗆
40,	Does anyone in the home have indoor home hobbics of crafts involving: None Heating , soldering , welding , model glues , paint , spray paint, wood finishing , Other Please specify what type of hobby:
41.	General family/home use of consumer products (please circle appropriate): Assume that Never = never used, Hardly ever = less than once/month, Occasionally = about once/month, Regularly = about once/week, and Often = more than once/week.
Produ	ct Frequency of Use
Spray	on deodorant (Never) Hardly ever Occasionally Regularly Often

plug in Glade type

Aeros	ol deodorizers	Never	Hardly ever	Occasionally	Regularly (Often
Insect	icides	Never	Hardly ever	Occasionally	Regularly	Often
Disinf	fectants	Never	Hardly ever	Occasionally	Regularly	Often
(Ques Produ	tion 41, continued)	Frequenc	y of Use			
Windo	ow cleaners	Never	Hardly ever	Occasionally	Regularly	Often
Spray-	on oven cleaners	Never	Hardly ever	Occasionally	Regularly	Often
Nail p	olish remover	Never	Hardly ever	Occasionally	Regularly	Often
Hair s	prays	Never	Hardly ever	Occasionally	Regularly	Often
42.	Please check weekly Dusting A Doce of the Dry sweeping A Vacuuming A Comp Polishing (furniture, e Washing/waxing floo Other O	vecK letimos a etc)∑one	week a a week	ces:		
43.	Other comments:	- u - u -		3 2000		
				2000 - 10		
		•				
(e						MEN STORY
		- 10 - Pa				

Date	4/25/2011
1.	Name;
	Address: 324 Boston Are
	Home Phone:Work Phone:
2.	What is the best time to call to speak with you? anything At: Work or Home
3.	Are you the Owner , Renter , Other (please specify) of this Home/Structure?
4.	Total number of occupants/persons at this location? 3 Number of children? 1 Ages? 17
5.	How long have you lived at this location? 1986 - 27-yrs
Gene	ral Home Description
6.	Type of Home/Structure (check only one): Single Family Home ⊠, Duplex □, Condominium□, Townhouse □, Other □
7.	Home/Structure Description: number of floors
8.	Age of Home/Structure: years, Not sure/Unknown & 01959 in west intend ?
9.	General Above-Ground Home/Structure construction (check all that apply): Wood , Brick , Concrete , Cement block , Other _
10.	Foundation Construction (check all that apply): Concrete slab Fieldstone Concrete block Fieldstone

	Elevated above ground/grade
1070	Other
11.	What is the source of your drinking water (check all that apply)?
	Public water supply 🗷
	Private well
	Bottled water
	Other, please specify
12.	Do you have a private well for purposes other than drinking?
	Yes □ Nox
	If yes, please describe what you use the well
	for:
13.	Do you have a septic system? Yes \(\omega\) No \(\omega\) Not used \(\omega\) Unknown \(\omega\)
14.	Do you have standing water outside your home (pond, ditch, swale)? Yes \(\sigma\) No \(\sigma\)
	Is the basement finished \(\sigma\) or unfinished \(\sigma\)? If finished, how many rooms are in the basement? How many are used for more than 2 hours/day? Is the basement floor (check all that apply) concrete \(\sigma\), tile \(\sigma\), carpeted \(\sigma\), dirt \(\sigma\), other\(\sigma\) (describe) Are the basement walls poured concrete \(\sigma\), cement block \(\sigma\), stone \(\sigma\), wood \(\sigma\), brick \(\sigma\), other\(\sigma\)
19.	Does the basement have a moisture problem (check one only)?
15.	Yes, frequently (3 or more times/yr) (cover in through which yes, occasionally (1-2 times/yr) (Yes, rarely (less than 1 time/yr) (No ())
20.	Does the basement ever flood (check one only)? Yes, frequently (3 or more times/yr) Yes, occasionally (1-2 times/yr) Yes, rarely (less than 1 time/yr) No Yes
21.	Does the basement have any of the following? (check all that apply) Floor cracks \square , Wall cracks \square , Sump \square , Floor drain \bowtie , Other hole/opening in floor \square (describe)

22.		ed or stored in the basement (check all that apply) Fremover Paint thinner
		Gasoline Diesel fuel Solvents Glue
	Laundry spot removers 🗆	Drain cleaners Pesticides
23.	Have you recently (within the home? Yes ☐ No 🗷	ne last six months) done any painting or remodeling in your
	If yes, please specify what v	vas done, where in the home, and what month:
24.		eting in your home within the last year? Yes 🗆 No 🕱
	If yes, when and where?	
25.	Do you regularly use or wor Yes, use dry-cleaning regula Yes, use dry-cleaning infreq Yes, work at a dry cleaning	uently (monthly or less)
	No 💆	
26.	Does anyone in your home of Yes I If yes, how many per No I If no, go to question 2	sons
27.	If yes for question 26 above,	are the work clothes washed at home? Yes 🗆 No 🔾
28.	Where is the washer/dryer lo	cated?
	Basement 🗵	
	Upstairs utility room	
	Kitchen 🖸	
	Garage □ Use a Laundromat □	
	Other, please specify \(\sigma\)	
29.	If you have a dryer, is it vent	ed to the outdoors? Yes 🗵 No 🗆
30.		g do you have (check all that apply) ectric □, Wood □, Coal □, Other
	Heat conveyance system:	Forced hot air \(\sigma\) Forced hot water \(\sigma\) Steam \(\sigma\) Radiant floor heat \(\sigma\)
		Wood stove ☐ Coal furnace ☐
3		Fireplace Other

31,	Do you have air conditioning? Yes No No No If yes, please check the appropriate type(s) Central air conditioning Unit(s) Window air conditioning unit(s) Other United States are since
32.	Other , please specify Do you use any of the following? Room fans , Ceiling fans , Attic fan Do you ventilate using the fan-only mode of your central air conditioning or forced air heating system? Yes No
33.	Has your home had termite or other pesticide treatment: Yes \(\begin{align*} \text{No \(\text{\infty}} \) Unknown \(\begin{align*} \text{Inknown} \(\text{Olimits} \) and approximate date of service
34.	Water Heater Type: Gas ♥, Electric □, By furnace □, Other □ Water heater location: Basement ♥, Upstairs utility room □, Garage □, Other □ (please describe) _
35.	What type of cooking appliance do you have? Electric □, Gas ☒, Other □
36.	Is there a stove exhaust hood present? Yes \(\begin{align*} \text{No \(\beta\)} \\\ Does it vent to the outdoors? Yes \(\beta\) No \(\beta\)
37.	Smoking in Home: None □, Rare (only guests)□, Moderate (residents light smokers)□, Heavy (at least one heavy smoker in household)□
38.	If yes to above, what do they smoke? Cigarettes Cigars □ Pipe □ Other □
39.	Do you regularly use air fresheners? Yes X No D
40.	Does anyone in the home have indoor home hobbies of crafts involving: None \(\beta\) Heating \(\beta\), soldering \(\beta\), welding \(\beta\), model glues \(\beta\), paint \(\beta\), spray paint, wood finishing \(\beta\), Other \(\beta\) Please specify whattype of hobby:
41.	General family/home use of consumer products (please circle appropriate): Assume that Never = never used, Hardly ever = less than once/month, Occasionally = about once/month, Regularly = about once/week, and Often = more than once/week.
Produ	ct Frequency of Use
Spray-	on deodorant Never Hardly ever Occasionally Regularly Often

Aero	sol deodorizers	Never	Hardly ever	Occasionally	Regularly	Often
Insec	ticides	Never	Hardly ever	Occasionally	Regularly	Often
Disin	fectants	Never	Hardly ever	Occasionally	Regularly	Often
(Ques	stion 41, continued		cy of Use			
Wind	ow cleaners	Never	Hardly ever	Occasionally	Regularly	Often
Spray	-on oven cleaners	Never	Hardly ever	Occasionally	Regularly	Often
Nail p	oolish remover	Never	Hardly ever	Occasionally	Regularly	Often
Hair s	prays	Never	Hardly ever	Occasionally	Regularly	Often
42.	Please check we Dusting A Dry sweeping A Vacuuming Polishing (furnit Washing/waxing Other P	ure, etc) 🛭		ices:		
43.	Other comments	:				
		11000				
			1,44,444			
			~			

Date:	4/24/2011
1.	Name:
	Address: UZZI F 4th St
	Home Phone: Work Phone:
2.	What is the best time to call to speak with you? WWF. At: Work □ or Home ♥?
3.	Are you the Owner A. Renter D., Other D. (please specify) of this Home/Structure?
4.	Total number of occupants/persons at this location? Number of children? Ages?
5.	How long have you lived at this location? 21 yrs burn infamily since 1927
Gener	ral Home Description
5.	Type of Home/Structure (check only one): Single Family Home ♥ Duplex □, Condominium □, Townhouse □, Other □
7.	Home/Structure Description: number of floors
3.	Age of Home/Structure: \(\frac{1922}{}\) years, Not sure/Unknown \(\frac{1}{2}\)
).	General Above-Ground Home/Structure construction (check all that apply): Wood , Brick , Concrete , Cement block , Other
0.	Foundation Construction (check all that apply): Concrete slab Fieldstone Concrete block

	Elevated above ground/grade Others
11.	Other What is the source of your drinking water (check all that apply)? Public water supply
	Private well
	Bottled water 🗆
	Other, please specify
12.	Do you have a private well for purposes other than drinking? Yes \(\simeq \) No \(\sum \)
	If yes, please describe what you use the well for:
13.	Do you have a septic system? Yes □ No ☑ Not used □ Unknown □
14.	Do you have standing water outside your home (pond, ditch, swale)? Yes O No Z
	ement Description, please check appropriate boxes. ou do not have a basement go to question 23.
15.	Is the basement finished □ or unfinished. ☒?
16.	If finished, how many rooms are in the basement? How many are used for more than 2 hours/day?
17.	is the basement floor (check all that apply) concrete \Box , the \Box , carpeted \Box , dift \Box ,
18.	other□(describe) ? Are the basement walls poured concrete □, cement block ☒, stone □, wood □, brick □, other□ ?
19.	Does the basement have a moisture problem (check one only)? Yes, frequently (3 or more times/yr) Yes, occasionally (1-2 times/yr) Yes, rarely (less than 1 time/yr) Yes, rarely (less than 1 time/yr)
20.	Does the basement ever flood (check one only)? Yes, frequently (3 or more times/yr) Yes, occasionally (1-2 times/yr) Yes, rarely (less than 1 time/yr) No No A -> 1968 - flood Aut - Hood's the
21.	Does the basement have any of the following? (check all that apply) Floor cracks ♥, Wall cracks □, Sump □, Floor drain ♠, Other hole/opening in floor □ (describe)

22.	Are any of the following used or stored in the basement (check all that apply) Paint Paint stripper/remover Paint thinner				
	Metal degreaser/cleaner Gasoline Diesel fuel Solvents Glue Glue				
	Laundry spot removers Drain cleaners D Pesticides D.				
23.	Have you recently (within the last six months) done any painting or remodeling in your home? Yes No 14. If yes, please specify what was done, where in the home, and what month:				
24.	Have you installed new carpeting in your home within the last year? Yes 📮 No 💆				
	If yes, when and where?				
25.	Do you regularly use or work in a dry cleaning service (check only one box)? Yes, use dry-cleaning regularly (at least weekly) Yes, use dry-cleaning infrequently (monthly or less) Yes, work at a dry cleaning service No				
26.	Does anyone in your home use solvents at work? Yes If yes, how many persons No In no, go to question 28				
27.	If yes for question 26 above, are the work clothes washed at home? Yes 🚨 No 🔾				
28.	Where is the washer/dryer located?				
	Basement				
	Upstairs utility room Kitchen				
	Garage 🗅				
	Use a Laundromat □				
	Other, please specify 🗆				
29.	If you have a dryer, is it vented to the outdoors? Yes No 🗅				
30.	What type(s) of home heating do you have (check all that apply) Fuel type: Gas A, Oil , Electric , Wood , Coal , Other Heat conveyance system: Forced hot air Forced hot water Steam Radiant floor heat Wood stove Coal furnace Fireplace				
	Other				

31.	Do you have air conditioning? Yes \(\mathbb{M}\) No \(\mathbb{O}\). If yes, please check the appropriate type(s) Central air conditioning \(\mathbb{M}\)				
	Will be the world				
	Other , please specify Do you use any of the following? Room fans , Ceiling fans , Attic fan				
32.	Do you use any of the following? Room fans , Ceiling fans , Attic fan .				
	Do you ventilate using the fan-only mode of your central air conditioning or forced air heating system? Yes No 🗆				
33.	Has your home had termite or other pesticide treatment: Yes 4 No Unknown U				
	If yes, please specify type of pest controlled,kvwtis and approximate date of service				
34.	Water Heater Type: Gas ☒, Electric □, By furnace □, Other □				
	Water heater location: Basement ⊠, Upstairs utility room □, Garage □, Other □ (please describe)				
35.	What type of cooking appliance do you have? Electric □, Gas ᠒, Other □				
36.	Is there a stove exhaust hood present? Yes \(\sigma\) No \(\sigma\)				
	Does it vent to the outdoors? Yes □ No □				
37.	Smoking in Home: None , Rare (only guests)□, Moderate (residents light smokers)□, Heavy (at least one heavy smoker in household)□				
38.	If yes to above, what do they smoke?				
	Cigarettes Cigars Cigars Cigars Cigarettes C				
	Pipe O Other O				
39.	Do you regularly use air fresheners? Yes ☑ No □				
40.	Does anyone in the home have indoor home hobbies of crafts involving: None \(\sigma\) Heating \(\sigma\), soldering \(\sigma\), welding \(\sigma\), model glues \(\sigma\), paint \(\sigma\), spray paint, wood finishing \(\sigma\), Other \(\sigma\) Please specify what type of hobby:				
41.	General family/home use of consumer products (please circle appropriate): Assume that Never = never used, Hardly ever = less than once/month, Occasionally = about once/month, Regularly = about once/week, and Often = more than once/week.				
Produ	nct Frequency of Use				
Spray	-on deodorant (Never) Hardly ever Occasionally Regularly Often				

Aero	sol deodorizers	Never	Hardly ever	Occasionally	Regularly	Often	
Insec	ticides	Never	Hardly ever	Occasionally	Regularly	Often	
Disinfectants		Never	Hardly ever	Occasionally	Regularly	Often	
	stion 41, continued)	_	611				
Produ	ict	Frequenc	y of Use				
Wind	ow cleaners	Never	Hardly ever	Occasionally	Regularly	Often	
Spray-on oven cleaners		Never	Hardly ever	Occasionally	Regularly	Often	
Nail polish remover		Never	Hardly ever	Occasionally	Regularly	Often	
Hair sprays		Never	Hardly ever	Occasionally	Regularly	Often	
42.	Please check weel Dusting Dry sweeping Vacuuming Polishing (furnitum Washing/waxing for Other Other D	re, etc) 🗆		ces:			
43.	Other comments:						_
						220.000	

200	Date:	4-26-11
	1.	Name:
		Address: 2227 E. 4 ¹⁵ sT.
. ^		Home Phone: Work Phone:
s hard of Appli	2.	What is the best time to call to speak with you? At: Work □ or Home □?
s hard of airy, difficultions time during s	<u>4</u> ~	Are you the Owner Renter , Other (please specify) of this Home/Structure?
	4.	Total number of occupants/persons at this location?
!	5.	How long have you lived at this location? ~1965
	Genera	al Home Description
(5.	Type of Home/Structure (check only one): Single Family Home X , Duplex \Bu , Condominium \Bu , Townhouse \Bu , Other \Bu
7		Home/Structure Description: number of floors 2 with a three Basement? Yes No Crawl Space? Yes No No Crawl Space? Yes No
8		Age of Home/Structure: 1912 years, Not sure/Unknown [
.89		General Above-Ground Home/Structure construction (check all that apply): Wood , Brick □, Concrete □, Cement block □, Other □
1	9	Foundation Construction (check all that apply): Concrete slab Fieldstone Concrete block

	Elevated above ground/grade 🗆
11.	Other What is the source of your drinking water (check all that apply)?
	Public water supply
	Private well Q
	Bottled water 🗆
	Other, please specify
12.	Do you have a private well for purposes other than drinking? Yes D No 2
	If yes, please describe what you use the well for:
13.	Do you have a septic system? Yes \(\sigma \) No tused \(\sigma \) Unknown \(\sigma \)
14.	Do you have standing water outside your home (pond, ditch, swale)? Yes 🖸 No 💢
Base	ment Description, please check appropriate boxes.
If yo	u do not have a basement go to question 23.
15.	Is the basement finished or unfinished ?
16.	If finished, how many rooms are in the basement? How many are used for more than 2 hours/day?
17.	Is the basement floor (check all that apply) concrete , tile , carpeted , dirt ,
	other (describe) ?
18.	other (describe) ? Are the basement walls poured concrete , cement block , stone , wood , brick , other ?
19.	Does the basement have a moisture problem (check one only)?
	Yes, frequently (3 or more times/yr)
	Yes, occasionally (1-2 times/yr)
	Yes, rarely (less than 1 time/yr)
	No 💆
20.	Does the basement ever flood (check one only)?
	Yes, frequently (3 or more times/yr)
	Yes, occasionally (1-2 times/yr)
	Yes, rarely (less than 1 time/yr)
	No 🏋
21.	Does the basement have any of the following? (check all that apply). Floor cracks \square , Wall cracks \square , Sump \square , Floor drain \square , Other hole/opening in floor \square
	(describe) Sampling points
	LA Mostor
	(describe) Sump , Floor drain A, Other hole/opening in floor & Sampling points in base mont from Wroning H-6 assessment
	1 I Char Cravis y H-6 assessment
	date / Internet
-	det for crankyone H-6 in base mont from Aronom in Markeyone H-6 assessment
	126



22.	Are any of the following used or stored in the basement (check all that apply) Paint Paint stripper/remover Paint thinner
	Metal degreaser/cleaner ☐ Gasoline ☐ Diesel fuel ☐ Solvents ☐ Glue ☐ Laundry spot removers ☐ Drain cleaners ☐ Pesticides ☐
23.	Have you recently (within the last six months) done any painting or remodeling in your home? Yes \(\sigma\) No \(\mathbb{\text{N}}\)
	If yes, please specify what was done, where in the home, and what month:
24.	Have you installed new carpeting in your home within the last year? Yes \(\sigma\) No \(\sigma\)
25.	Do you regularly use or work in a dry cleaning service (check only one box)? Yes, use dry-cleaning regularly (at least weekly) Yes, use dry-cleaning infrequently (monthly or less) Yes, work at a dry cleaning service No
26.	Does anyone in your home use solvents at work? Yes If yes, how many persons No 1 f no, go to question 28
27.	If yes for question 26 above, are the work clothes washed at home? Yes 🗆 No 🗅
28.	Where is the washer/dryer located? Basement
	Upstairs utility room Kitchen
	Garage 🗋
	Use a Laundromat 🔾
	Other, please specify
29.	If you have a dryer, is it vented to the outdoors? Yes X No D
30.	What type(s) of home heating do you have (check all that apply) Fuel type: Gas , Oil , Electric , Wood , Coal , Other
	Heat conveyance system: Forced hot air Forced hot water □ Steam □ Radiant floor heat □ Wood stove □ Coal furnace □ Fireplace □ Other

31.	Do you have air conditioning? Yes No . If yes, please check the appropriate type(s) Central air conditioning
	Window air conditioning unit(s)□
32.	Other , please specify Do you use any of the following? Room fans , Ceiling fans . Attic fan prof som 5 Do you ventilate using the fan-only mode of your central air conditioning or forced air heating system? Yes No.
33.	Has your home had termite or other pesticide treatment: Yes \(\sigma\) No \(\sigma\) Unknown \(\sigma\) If yes, please specify type of pest controlled,
34.	Water Heater Type: Gas X, Electric X, By furnace □, Other
	Water heater location: Basement Upstairs utility room □, Garage □, Other □ (please describe)
35.	What type of cooking appliance do you have? Electric □, Gas ★ Other
36.	Is there a stove exhaust hood present? Yes \(\omega\) No \(\omega\) Does it vent to the outdoors? Yes \(\omega\) No \(\omega\)
37.	Smoking in Home: None A, Rare (only guests), Moderate (residents light smokers), Heavy (at least one heavy smoker in household)
38.	If yes to above what do they smoke? Cigarettes Other Other
39.	Do you regularly use air fresheners? Yes No Do Cassim ly
40.	Does anyone in the home have indoor home hobbies of crafts involving: None \(\sigma\) Heating \(\sigma\), soldering \(\sigma\), welding \(\sigma\), model glues \(\sigma\), paint \(\sigma\), spray paint, wood finishing \(\sigma\), Other \(\sigma\) Please specify whattype of hobby:
41.	General family/home use of consumer products (please circle appropriate): Assume that Never = never used, Hardly ever = less than once/month, Occasionally = about once/month, Regularly = about once/week, and Often = more than once/week.
Produc	t Frequency of Use
Spray-	on deodorant Never Hardly ever Occasionally Regularly Often

Aeros	ol deodorizers	Never	Hardly ever	Occasionally	Regularly	Often
Insect	icides	Never	Hardly ever	Occasionally	Regularly	Often
Disint	fectants	Never	Hardly ever (Occasionally	Regularly	Often
(Ques <u>Produ</u>	tion 41, continued)	Frequenc	y of Use			
Windo	ow cleaners	Never	Hardly ever	Occasionally	Regularly	Often
Spray-on oven cleaners		Never (Hardly ever	Occasionally	Regularly	Often
Nail polish remover		Never	Hardly ever	Occasionally	Regularly	Often
Hair sprays		Never	Hardly ever	Occasionally	Regularly	Often
42.	Please check weekly Dusting X Dry sweeping X Vacuuming X Polishing (furniture Washing/waxing flo			ces:		
43.	Other comments:		***			

***					-73.00	
					44.41	

Indoor Air Assessment Survey

Date:	4/29/201
1.	Name:
	Address: 22-33 = 4th st
	Home Phone: Work Phone:
2.	What is the best time to call to speak with you? At: Work □ or Home □?
3.	Are you the Owner, Renter , Other (please specify) of this Home/Structure?
4.	Total number of occupants/persons at this location? 2 Number of children?
5.	How long have you lived at this location? ~ 20 yrs - daugnfer lives have
Gener	al Home Description
6.	Type of Home/Structure (check only one): Single Family Home \P , Duplex \square , Condominium \square , Townhouse \square , Other \square
7.	Home/Structure Description: number of floors
8.	Age of Home/Structure: years, Not sure/Unknown
9.	General Above-Ground Home/Structure construction (check all that apply): Wood □, Brick □, Concrete □, Cement block ☒, Other □
10.	Foundation Construction (check all that apply): Concrete slab Fieldstone Concrete block
	H - 5
or A hos	man > as "odor on dothes in closet

rear bedroom > gos odor on dother in closet doon't notice it elsewhere in the house-

	Elevated above ground/grade U Other
11.	
	Public water supply 15
	Private well
	Bottled water 🔼
	Other, please specify
12,	
	Yes No X
3	If yes, please describe what you use the well
	for:
13.	Do you have a septic system? Yes□ No Not used □ Unknown □
14.	Do you have standing water outside your home (pond, ditch, swale)? Yes 🔾 No 🔯
	ement Description, please check appropriate boxes. ou do not have a basement go to question 23. Is the basement finished \(\sigma\) or unfinished \(\overline{\omega}\)?
16,	If finished, how many rooms are in the basement?
10,	How many are used for more than 2 hours/day?
17.	Is the basement floor (check all that apply) concrete \(\overline{\overlin
18.	Are the basement walls poured concrete \square , cement block \square , stone \square , wood \square , brick \square , other \square
19.	Does the basement have a moisture problem (check one only)?
	Yes, frequently (3 or more times/yr) a depunds on amount of vain
	Yes, occasionally (1-2 times/yr)
•	Yes, rarely (less than 1 time/yr) □ No □
20.	Does the basement ever flood (check one only)?
	Yes, frequently (3 or more times/yr)
	Yes, occasionally (1-2 times/yr)
	Yes, rarely (less than I time/yr)
	No 🕽
21.	Does the basement have any of the following? (check all that apply) Floor cracks □, Wall cracks □, Sump □, Floor drain ☒, Other hole/opening in floor □
	(describe)

22.	Are any of the following used or stored in the basement (check all that apply) Paint Paint stripper/remover Paint thinner Metal degreaser/cleaner Gasoline Diesel fuel Solvents Glue Laundry spot removers Drain cleaners Pesticides						
23.	Have you recently (within the last six months) done any painting or remodeling in your home? Yes No.						
24.	Have you installed new carpeting in your home within the last year? Yes \(\sigma\) No \(\sigma\) If yes, when and where?						
25.	Do you regularly use or work in a dry cleaning service (check only one box)? Yes, use dry-cleaning regularly (at least weekly) Yes, use dry-cleaning infrequently (monthly or less) Yes, work at a dry cleaning service No.						
26.	Does anyone in your home use solvents at work? Yes ☐ If yes, how many persons No ☐ If no, go to question 28						
27.	If yes for question 26 above, are the work clothes washed at home? Yes 🔾 No 🔾						
28,	Where is the washer/dryer located? Basement Upstairs utility room Kitchen Garage Use a Laundromat Other, please specify						
29.	If you have a dryer, is it vented to the outdoors? Yes 🗘 No 🗆						
30.	What type(s) of home heating do you have (check all that apply) Fuel type: Gas \(\) Oil \(\), Electric \(\), Wood \(\), Coal \(\), Other Heat conveyance system: Forced hot air \(\) Forced hot water \(\) Steam \(\) Radiant floor heat \(\) Wood stove \(\) Coal furnace \(\) Fireplace \(\) Other						

31.	Do you have air conditioning? Yes No □. If yes, please check the appropriate type(s) Central air conditioning ⊠
	Window air conditioning unit(s)☐ Other ☐, please specify
32.	Do you use any of the following? Room fans , Ceiling fans , Attic fan Do you ventilate using the fan-only mode of your central air conditioning or forced air heating system? Yes No .
33.	Has your home had termite or other pesticide treatment: Yes \(\sigma\) No \(\sigma\) Unknown \(\sigma\) If yes, please specify type of pest controlled,
34.	Water Heater Type: Gas ♥, Electric □, By furnace □, Other □
	Water heater location: Basement , Upstairs utility room □, Garage □, Other □ (please describe)
35.	What type of cooking appliance do you have? Electric □, Gas ☒, Other □
36.	Is there a stove exhaust hood present? Yes \(\sigma\) No \(\sigma\) Does it vent to the outdoors? Yes \(\sigma\) No \(\sigma\)
37.	Smoking in Home: None (only guests) →, Moderate (residents light smokers) →, Heavy (at least one heavy smoker in household) →
38.	If yes to above, what do they smoke? Cigarettes Cigars Other Other
39.	Do you regularly use air fresheners? Yes No 🗆
40.	Does anyone in the home have indoor home hobbies of crafts involving: None \(\sigma\) Heating \(\sigma\), soldering \(\sigma\), welding \(\sigma\), model glues \(\sigma\), paint \(\sigma\), spray paint, wood finishing \(\sigma\), Other \(\sigma\) Please specify what type of hobby:
41.	General family/home use of consumer products (please circle appropriate): Assume that Never = never used, Hardly ever = less than once/month, Occasionally = about once/month, Regularly = about once/week, and Often = more than once/week.
Produ	ct Frequency of Use
Designation of the last of the	on deodorant Never Hardly ever Occasionally Regularly Often

Aero:	sol deodorizers	Never	Hardly ever	Occasionally	Regularly	Often	
Insec	ticides	Never	Hardly ever	Occasionally	Regularly	Often	
Disin	fectants	Never	Hardly ever	Occasionally	Regularly	Often	
(Ques	stion 41, continued)	Frequenc	v of Hee				
Frouc	K-1	Prequenc	7 01 05c				
Wind	ow cleaners	Never	Hardly ever	Occasionally	Regularly	Often	
Spray	on oven cleaners	Never	(Hardly ever)	Occasionally	Regularly	Often	
Nail p	oolish remover	Never	Mardly ever	Occasionally	Regularly	Often	
Hair sprays		Never	Hardly ever	Occasionally	Regularly	Often	
42.	Please check weekly household cleaning practices: Dusting Dry sweeping Vacuuming Polishing (furniture, etc) Washing/waxing floors Other Other						
43.	Other comments:						
							-
					***		-
							-
	10.1					* **	

Date:	4/27/201
ĩ.	Name:
е	Address: VB7 E. HU ST
	Home Phone: Work Phone
2.	What is the best time to call to speak with you? Many At: Work □ or Home □?
3.	Are you the Owner A, Renter D, Other D (please specify)of this Home/Structure?
4.	Total number of occupants/persons at this location? 6 Number of children? 3 Ages? W2 7.11
5.	How long have you lived at this location? Www.
Gener	al Home Description
6.	Type of Home/Structure (check only one): Single Family Home (, Duplex), Condominium , Townhouse , Other .
7.	Home/Structure Description: number of floors Basement? Yes No C Crawl Space? Yes No C If Yes, under how much of the house's area? 50 %
8 .	Age of Home/Structure:years, Not sure/Unknown
9.	General Above-Ground Home/Structure construction (check all that apply): Wood □, Brick ☒, Concrete □, Cement block □, Other □
10.	Foundation Construction (check all that apply): Concrete slab

	Elevated above ground/grade 🖵
11	Other What is the source of your drinking water (check all that apply)?
11.	Public water supply
	Private well
	Bottled water
	Other, please specify
12.	Do you have a private well for purposes other than drinking?
	Yes No X
	If yes, please describe what you use the well
	for:
13.	Do you have a septic system? Yes \(\simega \) No \(\simega \) Not used \(\simega \) Unknown \(\simega \)
14.	Do you have standing water outside your home (pond, ditch, swale)? Yes O No 1
Dana	ment Description, please check appropriate boxes.
	u do not have a basement go to question 23.
II yo	a do not have a basement go to duesnon 25.
15.	
16.	Is the basement finished or unfinished ? If finished, how many rooms are in the basement? while open and will your How many are used for more than 2 hours/day? all - steepul steepul is the basement floor (check all that apply) concrete the tile of the carpeted of the difference of the carpeted of the
17.	other (describe)
18.	Are the basement walls poured concrete \square , cement block stone \square , wood \square , brick \square , other \square
19.	Does the basement have a moisture problem (check one only)?
	Yes, frequently (3 or more times/yr)□
	Yes, occasionally (1-2 times/yr)
	Yes, rarely (less than 1 time/yr)
	No 🗵
20.	Does the basement ever flood (check one only)?
	Yes, frequently (3 or more times/yr)
	Yes, occasionally (1-2 times/yr)
	Yes, rarely (less than I time/yr)
	No 💆
21.	Does the basement have any of the following? (check all that apply) Floor cracks X,
	Wall cracks Ø, Sump □, Floor drain Ø, Other hole/opening in floor Ø
	(describe) privious sample ports

22.	Are any of the following used or stored in the basement (check all that apply) Paint A Paint stripper/remover Paint thinner Metal degreaser/cleaner Gasoline Diesel fuel Solvents Glue Laundry spot removers Drain cleaners Pesticides
23.	Have you recently (within the last six months) done any painting or remodeling in your home? Yes No I No I If yes, please specify what was done, where in the home, and what month: Puntry Indicates
24.	Have you installed new carpeting in your home within the last year? Yes□ No ☐ If yes, when and where?
25.	Do you regularly use or work in a dry cleaning service (check only one box)? Yes, use dry-cleaning regularly (at least weekly) Yes, use dry-cleaning infrequently (monthly or less) Yes, work at a dry cleaning service No
26.	Does anyone in your home use solvents at work? Yes If yes, how many persons No If no, go to question 28
27.	If yes for question 26 above, are the work clothes washed at home? Yes \(\sigma\) No \(\sigma\)
28.	Where is the washer/dryer located? Basement Upstairs utility room Kitchen Garage Use a Laundromat Other, please specify
29.	If you have a dryer, is it vented to the outdoors? Yes ☑ No □
30.	What type(s) of home heating do you have (check all that apply) Fuel type: Gas , Oil , Electric , Wood , Coal , Other Heat conveyance system: Forced hot air , Forced hot water Steam Radiant floor heat Wood stove Coal furnace Fireplace Other

31.	Do you have air conditioning? Yes \(\vec{\pi}\) No \(\superstart{\Pi}\). If yes, please check the appropriate type(s) Central air conditioning \(\superstart{\Pi}\) Window air conditioning unit(s)\(\vec{\pi}\)
32.	Other , please specify Do you use any of the following? Room fans , Ceiling fans , Attic fan Do you ventilate using the fan-only mode of your central air conditioning or forced air heating system? Yes No
33.	Has your home had termite or other pesticide treatment: Yes X No U Unknown I If yes, please specify type of pest controlled, how and approximate date of service about 8 yrs.
34.	Water Heater Type: Gas □, Electric □, By furnace □, Other www
	Water heater location: Basement ⋈, Upstairs utility room □, Garage □, Other □ (please describe)
35.	What type of cooking appliance do you have? Electric □, Gas ☒, Other □
36.	Is there a stove exhaust hood present? Yes \(\sigma\) No \(\frac{1}{2}\). Does it vent to the outdoors? Yes \(\sigma\) No \(\sigma\)
37.	Smoking in Home: None □, Rare (only guests)□, Moderate (residents light smokers)□, Heavy (at least one heavy smoker in household)□.
38.	If yes to above, what do they smoke? Cigarettes Cigars □ Pipe □ Other □
39.	Do you regularly use air fresheners? Yes X No □
40.	Does anyone in the home have indoor home hobbies of crafts involving: None ☐ Heating ☐, soldering ☐, welding ☐, model glues ☐, paint ☐, spray paint, wood finishing ☐, Other ☐ Please specify what type of hobby:
41.	General family/home use of consumer products (please circle appropriate): Assume that Never = never used, Hardly ever = less than once/month, Occasionally = about once/month, Regularly = about once/week, and Often = more than once/week.
Produ	ct Frequency of Use
Spray	on decoderant Never Hardly ever Occasionally Regularly Often

Aero	sol deodorizers	Never	Hardly ever	Occasionally	Regularly	Often
Insec	ticides	Never	Hardly ever	Occasionally	Regularly	Often
Disir	fectants	Neve	Hardly ever	Occasionally	Regularly	Often
(Que Prode	stion 41, continued)	Frequenc	y of Use			
Wind	low cleaners	Never	Hardly ever	Occasionally	Regularly	Often
Spray	-on oven cleaners	Never	Hardly ever	Occasionally	Regularly	Often
Nail polish remover		Never	Hardly ever) Occasionally	Regularly	Often
Hair sprays		Never	Hardly ever	Occasionally	Regularly	Often
42.	Please check week! Dusting \(\textstyle \) Dry sweeping \(\textstyle \) Vacuuming \(\textstyle \) Polishing (furniture \(\textstyle \) Washing/waxing fleether \(\textstyle \)	e, etc) 🖸		ices:		
43.	Other comments: _			.6%		
		V VI				

				10000000		

45

OCCUPIED DWELLING QUESTIONNAIRE

Date:	4/24/201
1.	Name:
	Address: 2413 = 4th 17
	Home Phone: Work-Phone:
2.	What is the best time to call to speak with you? At: Work □ or Home □?
3.	Are you the Owner , Renter , Other (please specify) of this Home/Structure?
4.	Total number of occupants/persons at this location? 2 Number of children? Ø Ages?
5.	How long have you lived at this location? \\\(\lambda \left \\ \\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \
Gener	ral Home Description
6.	Type of Home/Structure (check only one): Single Family Home ♥, Duplex □, Condominium□, Townhouse□, Other □
7.	Home/Structure Description: number of floors Basement? Yes No Attic Crawl Space? Yes No Attic If Yes, under how much of the house's area? 50_%
8.	Age of Home/Structure: years, Not sure/Unknown
9.	General Above-Ground Home/Structure construction (check all that apply): Wood □, Brick □, Concrete □, Cement block ☑, Other □
10.	Foundation Construction (check all that apply): Concrete slab Fieldstone Concrete block Concrete block

	Elevated above ground/grade U Other
11.	What is the source of your drinking water (check all that apply)? Public water supply
	Private well •
	Bottled water .
	Other, please specify
12.	Do you have a private well for purposes other than drinking? Yes \(\subseteq \) No \(\subseteq \)
	If yes, please describe what you use the well for:
13.	Do you have a septic system? Yes \(\omega\) No \(\omega\) Not used \(\omega\) Unknown \(\omega\)
14.	Do you have standing water outside your home (pond, ditch, swale)? Yes A No Demonstrate boxes.
Base	ement Description, please check appropriate boxes.
	u do not have a basement go to question 23.
	5-1
15.	Is the basement finished or unfinished ?
16.	If finished, how many rooms are in the basement? 2
	If finished, how many rooms are in the basement? 2 How many are used for more than 2 hours/day? 1 - mgst of the time
17.	Is the basement floor (check all that apply) concrete (Δ) , tile (Δ) , carpeted (Δ) , dirt (Δ) .
	other (describe) ? Lander carpet
18.	Are the basement walls poured concrete \(\omega\), cement block \(\omega\), stone \(\omega\), wood \(\omega\), brick \(\omega\), other \(\omega\)?
19.	Does the basement have a moisture problem (check one only)?
	Yes, frequently (3 or more times/yr)
	Yes, occasionally (1-2 times/yr)
	Yes, rarely (less than 1 time/yr)
	No De -> not any more
20.	Does the basement ever flood (check one only)?
	Yes, frequently (3 or more times/yr)
	Yes, occasionally (1-2 times/yr)
	Yes, rarely (less than 1 time/yr)
	No 💆
21.	Does the basement have any of the following? (check all that apply) Floor cracks \square , Wall cracks \square , Sump \square , Floor drain \square , Other hole/opening in floor \square (describe)

22.	Are any of the following used or stored in the basement (check all that apply) Paint A Paint stripper/remover Paint thinner Metal degreaser/cleaner Gasoline Diesel fuel Solvents Glue Laundry spot removers Drain cleaners Pesticides					
23,	Have you recently (within the last six months) done any painting or remodeling in your home? Yes \(\sigma\) No \(\sigma\). If yes, please specify what was done, where in the home, and what month:					
24.	Have you installed new carpeting in your home within the last year? Yes \(\sigma\) No \(\sigma\)					
25.	Do you regularly use or work in a dry cleaning service (check only one box)? Yes, use dry-cleaning regularly (at least weekly) Yes, use dry-cleaning infrequently (monthly or less) Yes, work at a dry cleaning service No No					
26.	Does anyone in your home use solvents at work? Yes ☐ If yes, how many persons No ☒ If no, go to question 28					
27.	If yes for question 26 above, are the work clothes washed at home? Yes 🖵 No 🖵					
28.	Where is the washer/dryer located? Basement Upstairs utility room Kitchen Garage Use a Laundromat Other, please specify Other, please specify					
29.	If you have a dryer, is it vented to the outdoors? Yes 📈 No 🗆					
30.	What type(s) of home heating do you have (check all that apply) Fuel type: Gas A, Oil D, Electric D, Wood D, Coal D, Other Heat conveyance system: Forced hot air A - Not Some Forced hot water D Radiant floor heat D Wood stove D Coal furnace D Fireplace D Other					

31,	Do you have air conditioning? Yes \(\sum \) No \(\superatorname{\subset}\). If yes, please check the appropriate type(s) Central air conditioning \(\sum \)					
	Window air conditioning unit(s)□					
	Other , please specify					
32.	하는 것은 사람들이 보고 있는데 하는데 가는데 가는데 가는데 가는데 가는데 하는데 하는데 하는데 하는데 하는데 하는데 가는데 하는데 하는데 하는데 하는데 하는데 하는데 하는데 하는데 하는데 하					
	Do you ventilate using the fan-only mode of your central air conditioning or forced air					
	heating system? Yes Vo No					
33.	Has your home had termite or other pesticide treatment: Yes No Y Unknown O					
	If yes, please specify type of pest controlled,					
	and approximate date of service					
34.	Water Heater Type: Gas ☑, Electric □, By furnace □, Other					
	Wets best least a Reserved Heating william and D. Green D. Other D. C. hand					
	Water heater location: Basement ♥, Upstairs utility room □, Garage □, Other □ (please describe)					
35.	What type of cooking appliance do you have? Electric , Gas , Other					
36.	Is there a stove exhaust hood present? Yes⊠ No□					
	Does it vent to the outdoors? Yes \(\sigma\) No \(\sigma\)					
37.	Smoking in Home:					
2.4.	None □, Rare (only guests) ■ Moderate (residents light smokers) □,					
	Heavy (at least one heavy smoker in household)□					
38.	If yes to above, what do they smoke?					
	Pipe Other O					
	Cigarettes 🗷 Cigars 🗆 Pipe 🗆 Other 🖸					
39.	Do you regularly use air fresheners? Yes No D					
40.	Does anyone in the home have indoor home hobbies of crafts involving: None					
	Heating \square , soldering \square , welding \square , model glues \square , paint \square , spray paint,					
	wood finishing □, Other □ Please specify whattype of hobby:					
41.	General family/home use of consumer products (please circle appropriate): Assume that					
	Never = never used, Hardly ever = less than once/month, Occasionally = about					
	once/month, Regularly = about once/week, and Often = more than once/week.					
Produ	ict Frequency of Use					
mi - A Skole						
Spray	on deodorant Never Hardly ever Occasionally Regularly Often					

Aerosol deodorizers	Never	Hardly ever	Occasionally (Regularly	Often
Insecticides	Never	Hardly ever	Occasionally	Regularly	Often
Disinfectants	Never	Hardly ever	Occasionally	Regularly (Often
(Question 41, continued) Product	Frequenc	y of Use			
Window cleaners	Never	Hardly ever	Occasionally	Regularly	Often
Spray-on oven cleaners	Never	Hardly ever	Occasionally	Regularly	Often
Nail polish remover	Never	Hardly ever	Occasionally	Regularly	Often
Hair sprays New		Hardly ever	Occasionally	Regularly	Often
42. Please check weekly household cleaning practices: Dusting Dry sweeping Vacuuming Polishing (furniture, etc) Washing/waxing floors Other Uther Other Other Please check weekly household cleaning practices: Dusting practices: Dusting practices: Washing practices: Dusting weekly household cleaning practices: Dusting weekly household cleaning practices: Dusting weekly household cleaning practices:					
43. Other comments:					
			-272000		

Date:	<u> 4-27-11</u>
1.	Name:
	Address: 2417 E. 4 ¹⁵ sT.
	Home Phone: Work Phone:
2.	What is the best time to call to speak with you? Morning At: Work or Home ?
3.	Are you the Owner , Renter , Other (please specify)
4.	Total number of occupants/persons at this location? Number of children? Ages?
5.	How long have you lived at this location? 10 years
Gener	ral Home Description
6.	Type of Home/Structure (check only one): Single Family Home ⋈, Duplex □, Condominium □, Townhouse □, Other □
7.	Home/Structure Description: number of floors
8.	Age of Home/Structure:years, Not sure/Unknown
9.	General Above-Ground Home/Structure construction (check all that apply): Wood A Brick D, Concrete D, Cement block D, Other D
10.	Foundation Construction (check all that apply): Concrete slab Fieldstone Concrete block

	Elevated above ground/grade
11.	Other What is the source of your drinking water (check all that apply)?
11.	Public water supply
	Private well
	Bottled water 🔾
	Other, please specify
12.	Do you have a private well for purposes other than drinking?
	Yes O No A
	If yes, please describe what you use the well
	for:
13.	Do you have a septic system? Yes \ No \ Not used \ Unknown \ not aware of
14.	Do you have standing water outside your home (pond, ditch, swale)? Yes 🖵 No 💢
Dan	amout Description along Made are project house
	ement Description, please check appropriate boxes. ou do not have a basement go to question 23.
11 90	a do not have a basement go to question 25.
15.	Is the basement finished or unfinished ?
16.	If finished, how many rooms are in the basement?
	If finished, how many rooms are in the basement? How many are used for more than 2 hours/day? No
17.	Is the basement floor (check all that apply) concrete, tile , carpeted , dirt ,
	othert I(describe) 7
18.	Are the basement walls poured concrete \(\sigma\), cement block \(\mathbb{X}\), stone \(\sigma\), wood \(\sigma\), brick \(\sigma\),
	other 4
19.	Does the basement have a moisture problem (check one only)?
	Yes, frequently (3 or more times/yr) □
	Yes, occasionally (1-2 times/yr) □
	Yes, rarely (less than 1 time/yr)
	No
20.	Does the basement ever flood (check one only)?
	Yes, frequently (3 or more times/yr)
	Yes, occasionally (1-2 times/yr)
	Yes, rarely (less than 1 time/yr)
	No 😿
21	Does the becoment have any of the following? (check all that and a) Element [7]
21.	Does the basement have any of the following? (check all that apply) Floor cracks Wall cracks , Sump , Floor drain , Other hole/opening in floor Suffice Cracking
	(describe)
	(UCSCI IDC)

		Paint Paint stripper/remover Paint thinner
		Metal degreaser/cleaner ☐ Gasoline ☐ Diesel fuel ☐ Solvents ☐ Glue ☐
		Laundry spot removers Drain cleaners Pesticides non c
	23.	Have you recently (within the last six months) done any painting or remodeling in your home? Yes \(\sigma\) No \(\sigma\). If yes, please specify what was done, where in the home, and what month:
		if yos, please specify what was done, where it the nome, and what month.
	24.	Have you installed new carpeting in your home within the last year? Yes \(\sigma\) No \(\sigma\) If yes, when and where?
	25.	Do you regularly use or work in a dry cleaning service (check only one box)? Yes, use dry-cleaning regularly (at least weekly) \Box
		Yes, use dry-cleaning infrequently (monthly or less)
		Yes, work at a dry cleaning service □ No ▼
	26.	Does anyone in your home use solvents at work?
		Yes If yes, how many persons
		No fif no, go to question 28
	.27.	If yes for question 26 above, are the work clothes washed at home? Yes To No To
	28.	Where is the washer/dryer located?
		Basement Washer in Pasement Upstairs utility room
		Kitchen 🔾
		Garage 🗆
		Use a Laundromat 🖸
		Other, please specify 🗆
	29.	If you have a dryer, is it vented to the outdoors? Yes \(\sigma\) No \(\D\)
	30.	What type(s) of home heating do you have (check all that apply)
		Fuel type: Gas 🔀 Oil 🔾, Electric 🔾, Wood 🔾, Coal 🔾, Other
11.10	12	Heat conveyance system: Forced hot air D
TWATES	17 75	Forced hot water
nestual	aes	Steam 🔾
	7	Radiant floor heat one Tour
-140	er ak	Wood stove □ Coal furnace □
		Fireplace 🔾
		Other

Are any of the following used or stored in the basement (check all that apply)

22.

31.	Do you have air conditioning? Yes No . If yes, please check the appropriate type(s) Central air conditioning
	Window air conditioning unit(s) Other , please specify
32.	Do you use any of the following? Room fans , Ceiling fans , Attic fan Do you ventilate using the fan-only mode of your central air conditioning or forced air heating system? Yes No
33.	Has your home had termite or other pesticide treatment: Yes \(\sigma\) No \(\sigma\) Unknown \(\sigma\) If yes, please specify type of pest controlled,
34.	Water Heater Type: Gas ☐, Electric ☐, By furnace ☐, Other ☐ Water heater location: Basement ☐, Upstairs utility room ☐, Garage ☐, Other ☐ (please
	describe)
35.	What type of cooking appliance do you have? Electric □, Gas , Other □
36.	Is there a stove exhaust hood present? Yes \(\simega \) No \(\simega \) Fan to changt Does it vent to the outdoors? Yes \(\simega \) No \(\simega \)
37.	Smoking in Home: None Rare (only guests), Moderate (residents light smokers), Heavy (at least one heavy smoker in household)
38.	If yes to above, what do they smoke? Cigarettes Other Other
39.	Do you regularly use air fresheners? Yes No 🗆
40.	Does anyone in the home have indoor home hobbies of crafts involving: None Heating , soldering , welding , model glues , paint , spray paint, wood finishing , Other Please specify what type of hobby:
41.	General family/home use of consumer products (please circle appropriate): Assume that Never = never used, Hardly ever = less than once/month, Occasionally = about once/month, Regularly = about once/week, and Often = more than once/week.
rodu	ct Frequency of Use
Spray-	on deodorant Never Hardly ever Occasionally Regularly Often

Aero	sol deodorizers	Never	Hardly ever	Occasionally	Regularly	Often	
Insec	ticides	Never	Hardly ever	Occasionally	Regularly	Often	
Disin	fectants	Never	Hardly ever	Occasionally	Regularly	Often	
(Que: Prodi	stion 41, continued)	Frequen	icy of Use				
Wind	low cleaners	Never	Hardly ever	Occasionally	Regularly	Often	
Spray	v-on oven cleaners	Never	Hardly ever	Occasionally	Regularly	Often	
Nail p	oolish remover	Never) Hardly ever	Occasionally	Regularly	Often	
Hair sprays Never		Hardly ever	Occasionally	Regularly	Often		
42.	Please check week Dusting Dry sweeping Vacuuming Polishing (furnitur Washing/waxing for Other Other	e, etc) 🔭		routine	a cond	l e	
43.	Other comments:				To the		
•							
					VTV-10-10		
Andrew 17							
-	· · · · · · · · · · · · · · · · · · ·						

Date:	4-26-11
1.	Name:
	Address: 2421 E. 4 ¹² ST.
	F
	Home Phone: Work Phone:
2.	What is the best time to call to speak with you? At: Work □ or Home □?
3.	Are you the Owner , Renter , Other (please specify) of this Home/Structure?
4.	Total number of occupants/persons at this location? Z Number of children? Ages? You and grandson
5.	How long have you lived at this location? 1991
Gener	ral Home Description
6.	Type of Home/Structure (check only one): Single Family Home ∇ , Duplex \square , Condominium \square , Townhouse \square , Other \square
7.	Home/Structure Description: number of floors
8.	Age of Home/Structure: 1919 years, Not sure/Unknown
9.	General Above-Ground Home/Structure construction (check all that apply): Wood \(\omega\), Brick \(\sqrt{\omega}\), Concrete \(\omega\), Cement block \(\omega\), Other \(\omega\)
10.	Foundation Construction (check all that apply): Concrete slab Fieldstone Concrete block

	Elevated above ground/grade Other
11.	
	Private well
	Bottled water □
	Other, please specify
12.	Do you have a private well for purposes other than drinking? Yes \(\sigma \) No \(\sigma \)
	If yes, please describe what you use the well
	for:
13.	Do you have a septic system? Yes No X Not used Unknown U
14.	Do you have standing water outside your home (pond, ditch, swale)? Yes \(\sigma\) No \(\sigma\)
Rase	ement Description, please check appropriate boxes.
	ou do not have a basement go to question 23.
22.7.0	Bo to describe a superior as
15.	Is the basement finished □ or unfinished ☒?
16.	If finished, how many rooms are in the basement?
	How many are used for more than 2 hours/day?
17.	Is the basement floor (check all that apply) concrete , tile , carpeted , dirt ,
18.	other□(describe)? Are the basement walls poured concrete □, cement block ☒, stone □, wood □, brick □, other□ ?
19.	Does the basement have a moisture problem (check one only)?
	Yes, frequently (3 or more times/yr)
	Yes, occasionally (1-2 times/yr) hang lains
	Yes, rarely (less than 1 time/yr) \(\square\) No \(\square\)
20.	Does the basement ever flood (check one only)?
	Yes, frequently (3 or more times/yr)
	Yes, occasionally (1-2 times/yr) □
	Yes, rarely (less than I time/yr)
	No 💆
21.	Does the basement have any of the following? (check all that apply) Floor cracks Q,
	Wall cracks , Sump □, Floor drain , Other hole/opening in floor □
	(describe)

22.	Are any of the following used or stored in the basement (check all that apply)					
		er/remover Paint thinner Solvents Glue Glue				
	Laundry spot removers					
		Pesticides &				
23.	Shelt not cases I type	the last six months) done any painting or remodeling in your				
23.	home? Yes \(\mathbb{K}\) No \(\mathbb{O}\)	the last six months) done any painting of remodering in your				
		was done, where in the home, and what month:				
	in yes, picase specify what	it leading to the bestweent				
	CAL INCH 1-3. G.		-			
		<u> </u>				
24.		peting in your home within the last year? Yes Now				
	If yes, when and where?		=			
25.	Do you regularly use or we	ork in a dry cleaning service (check only one box)?				
	Yes, use dry-cleaning regu	Control of the second s				
		quently (monthly or less)				
	Yes, work at a dry cleaning					
	No X	* 35 to 48 A 18 September 2011 195				
26.	Does anyone in your home	use solvents at work?				
	Yes \(\square\) If yes, how many persons					
	No If no, go to question	28				
27.	If yes for question 26 above	e, are the work clothes washed at home? Yes 🗆 No 🗅				
0.0		10				
28.	Where is the washer/dryer	ocated?				
	Basement X					
	Upstairs utility room □ Kitchen □					
	Garage Q					
	Use a Laundromat \Box					
	Other, please specify					
	Omer, picase speetry =					
29.	If you have a dryer, is it ver	nted to the outdoors? Yes 😾 No 🗆				
30.	What type(s) of home heati	ng do you have (check all that apply)				
T. (27) (27) (27)		lectric , Wood , Coal , Other				
	Heat conveyance system:	Forced hot air 🗷				
		Forced hot water 🔾				
		Steam 🔾				
		Radiant floor heat 🔾				
		Wood stove 🗆				
		Coal furnace				
		Fireplace 🖸				
		Other				

31.	Do you have air conditioning? Yes No . If yes, please check the appropriate type(s) Central air conditioning
	Window air conditioning unit(s)
	Other , please specify
32.	Do you use any of the following? Room fans \(\sigma\), Ceiling fans \(\sigma\), Attic fan \(\sigma\)
	Do you ventilate using the fan-only mode of your central air conditioning or forced air
	Has your home had termite or other pesticide treatment, Yes No Unknown
22	sping entrail
33.	Has your home had termite or other pesticide treatment, yes a No U Unknown U
	If yes, please specify type of pest controlled, Spile tagger in termins, was not a service
34.	Water Heater Type: Gas ☒ Electric ☐, By furnace ☐, Other
	Water heater location: Basement , Upstairs utility room □, Garage □, Other □ (please describe)
35.	What type of cooking appliance do you have? Electric , Gas , Other
36.	Is there a stove exhaust hood present? Yes \(\sigma\) No \(\sigma\)
	Does it vent to the outdoors? Yes \(\sigma\) No \(\sigma\)
37.	Smoking in Home:
	None Rare (only guests), Moderate (residents light smokers), Heavy (at least one heavy smoker in household)
38.	If yes to above, what do they smoke?
	Cigarettes Cigars C
	Pipe 1 Other 1
39.	Do you regularly use air fresheners? Yes No 🗆
40.	Does anyone in the home have indoor home hobbies of crafts involving: None
	Heating □, soldering □, welding □, model glues □, paint □, spray paint, wood finishing □, Other □ Please specify what type of hobby:
41.	General family/home use of consumer products (please circle appropriate): Assume that
	Never = never used, Hardly ever = less than once/month, Occasionally = about
	once/month, Regularly = about once/week, and Often = more than once/week.
Produc	et Frequency of Use
Spray-	on deodorant Never Hardly ever Occasionally Regularly Often

Aeros	sol deodorizers	Never	Hardly ever	Occasionally	Regularly	Often
Insec	ticides	Never (Hardly even	Occasionally	Regularly	Often
Disin	fectants	Never	Hardly ever	Occasionally	Regularly	Often
(Ques	ation 41, continued)	Frequence	cy of Use			
Wind	ow cleaners	Never	Hardly ever	Occasionally	Regularly	Often
Spray	on oven cleaners	letta	Hardly ever	Occasionally	Regularly	Often
Nail p	olish remover	Never (Hardly ever	Occasionally	Regularly	Often
Hair sprays		Never	Hardly ever	Occasionally	Regularly	Often
42.	Please check week! Dusting C Dry sweeping C Vacuuming C Polishing (furniture Washing/waxing flood)			ces:		
43.	Other comments:					
		, , , , ,		1017.		

: 1+-25-11	
Name:	
Address: 2427 E. 4th ST., Warrloo, IA	5-100/W - 50-100-100 50-6-100
Home Phon Work Phone:	
What is the best time to call to speak with you? 7-3 At: Work or	Home □?
Are you the Owner A, Renter D, Other D (please specify) of this Home/Structure? L Husband	
Total number of occupants/persons at this location? Number of children? 4 Ages? 10 - 21	
How long have you lived at this location? 23	
eral Home Description	
Type of Home/Structure (check only one): Single Family Home ⋈, Condominium, Townhouse, Other	Duplex □,
Home/Structure Description: number of floors Basement? Yes ☑ No ☐ Crawl Space? Yes ☐ No ☐ If Yes, under how much of the house's area?%	
Age of Home/Structure: ~ Mrd 1920'S years, Not sure/Unknown	
General Above-Ground Home/Structure construction (check all that apply): Wood A Brick D, Concrete D, Cement block D, Other D	
Foundation Construction (check all that apply): Concrete slab Fieldstone	
	Name: Address: 3427 E. 445 57., Wakeloo, IA Home Phon Work Phone: What is the best time to call to speak with you? 7-3 At: Work or Are you the Owner M, Renter D, Other D (please specify) of this Home/Structure? L Hospend Total number of occupants/persons at this location? Number of children? Ages? 10-21 How long have you lived at this location? 2-3 ral Home Description Type of Home/Structure (check only one): Single Family Home M, Condominium D, Townhouse D, Other D Home/Structure Description: number of floors Basement? Yes No D Crawl Space? Yes No D Grawl Space? Yes No D General Above-Ground Home/Structure construction (check all that apply): Wood M, Brick D, Concrete D, Cement block D, Other D L D OWNEY No L SUM Foundation Construction (check all that apply): Concrete slab D

	Elevated above ground/grade Other
11.	What is the source of your drinking water (check all that apply)? Public water supply
	Private well
	Bottled water
	Other, please specify
12.	Do you have a private well for purposes other than drinking?
	Yes No No
	If yes, please describe what you use the well for:
13.	Do you have a septic system? Yes □ No 🌠 Not used □ Unknown □
14.	Do you have standing water outside your home (pond, ditch, swale)? Yes D No 🖎
	ement Description, please check appropriate boxes. ou do not have a basement go to question 23.
15.	Is the basement finished 🔾 or unfinished 📜?
16.	If finished, how many rooms are in the basement?
	How many are used for more than 2 hours/day?
17.	Is the basement floor (check all that apply) concrete ☒, tile ☐, carpeted ☐, dirt ☐, other☐(describe) ?
18.	other□(describe) ? Are the basement walls poured concrete □, cement block ☒, stone □, wood □, brick □, other□ ?
19.	Does the basement have a moisture problem (check one only)?
	Yes, frequently (3 or more times/yr)
	Yes, occasionally (1-2 times/yr) □
	Yes, rarely (less than 1 time/yr) No □
20.	Does the basement ever flood (check one only)?
	Yes, frequently (3 or more times/yr) □
	Yes, occasionally (1-2 times/yr)
	Yes, rarely (less than I time/yr)
	No 🔀
21.	Does the basement have any of the following? (check all that apply) Floor cracks , Wall cracks , Sump , Floor drain Other hole/opening in floor (describe)
	3 Fly draws

22.	Are any of the following used or stored in the basement (check all that apply) Paint \(\mathbb{Y} \) Paint stripper/remover \(\mathbb{D} \) Paint thinner \(\mathbb{D} \) Metal degreaser/cleaner \(\mathbb{D} \) Gasoline \(\mathbb{D} \) Diesel fuel \(\mathbb{D} \) Solvents \(\mathbb{D} \) Glue \(\mathbb{D} \) Laundry spot removers \(\mathbb{D} \) Drain cleaners \(\mathbb{D} \) Pesticides \(\mathbb{D} \)
23.	Have you recently (within the last six months) done any painting or remodeling in your home? Yes No St. If yes, please specify what was done, where in the home, and what month:
24.	Have you installed new carpeting in your home within the last year? Yes \(\sigma\) No \(\sigma\) If yes, when and where?
25.	Do you regularly use or work in a dry cleaning service (check only one box)? Yes, use dry-cleaning regularly (at least weekly) Yes, use dry-cleaning infrequently (monthly or less) Yes, work at a dry cleaning service No.
26.	Does anyone in your home use solvents at work? Yes If yes, how many persons No If no, go to question 28
27.	If yes for question 26 above, are the work clothes washed at home? Yes \(\sigma\) No \(\sigma\)
28.	Where is the washer/dryer located? Basement □ Upstairs utility room Kitchen □ Garage □ Use a Laundromat □ Other, please specify □
29.	If you have a dryer, is it vented to the outdoors? Yes 💆 No 🗆
30.	What type(s) of home heating do you have (check all that apply) Fuel type: Gas , Oil , Electric , Wood , Coal , Other Heat conveyance system: Forced hot air Forced hot water Steam Radiant floor heat Wood stove Coal furnace Fireplace Other

31.	Do you have air conditioning? Yes \ No \(\sigma\). If yes, please check the appropriate type(s) Central air conditioning \(\sigma\)
	Window air conditioning unit(s)
	Other D places specify
32.	Do you use any of the following? Room fans A, Ceiling fans A, Attic fan Do you ventilate using the fan-only mode of your central air conditioning or forced air heating system? Yes No A
33.	Has your home had termite or other pesticide treatment: Yes \(\sigma\) No \(\sigma\) Unknown \(\sigma\) If yes, please specify type of pest controlled,
34.	Water Heater Type: Gas ♠ Electric □, By furnace □, Other
	Water heater location: Basement \(\sum_{\text{U}}\) Upstairs utility room \(\sup_{\text{N}}\), Garage \(\sup_{\text{N}}\), Other \(\sup_{\text{U}}\) (please describe)
35.	What type of cooking appliance do you have? Electric ⋈, Gas □, Other □
36.	Is there a stove exhaust hood present? Yes \(\sigma\) No \(\sigma\) Does it vent to the outdoors? Yes \(\sigma\) No \(\sigma\)
37.	Smoking in Home: None Rare (only guests), Moderate (residents light smokers), Heavy (at least one heavy smoker in household)
38.	If yes to above, what do they smoke?
50.	Cigarettes C Cigars C
	Pipe O Other O
39.	Do you regularly use air fresheners? Yes Q No 🖎
40.	Does anyone in the home have indoor home hobbics of crafts involving: None ☐ Heating ☐, soldering ☐, welding ☐, model glues ☐, paint ☐, spray paint, wood finishing ☐, Other ☐ Please specify what type of hobby:
41.	General family/home use of consumer products (please circle appropriate): Assume that Never = never used, Hardly ever = less than once/month, Occasionally = about once/month, Regularly = about once/week, and Often = more than once/week.
Produ	Frequency of Use
Spray	on deodorant (Never) Hardly ever Occasionally Regularly Often

Aeros	sol deodorizers	Never	Hardly ever	Occasionally	Regularly	Often
Insect	ticides .	Never	Hardly ever	Occasionally	Regularly	Often
Disin	fectants	Never	Hardly ever	Occasionally	Regularly	Often
(Ques	tion 41, continued)	Frequenc	y of Use			
Winde	ow cleaners	Never	Hardly ever	Occasionally	Regularly	Often
Spray	on oven cleaners	Never	Hardly ever	Occasionally	Regularly	Often
Nail p	olish remover	Never	Hardly ever	Occasionally	Regularly	Often
Hair sprays (Neyer	Hardly ever	Occasionally	Regularly	Often
42.	Please check week Dusting A Dry sweeping A Vacuuming A Polishing (furnitus Washing/waxing to Other O	re, etc) 🖸	1/mm+h	ces:		
43.	Other comments:					
	400					
-				***************************************		311-0

Date:	4-25-11
1.	Name:
	Address: 2600 E 445 ST., W'100
	Home Phone:
2.	What is the best time to call to speak with you? Lulving At: Work or Home
3.	Are you the Owner , Renter , Other (please specify) of this Home/Structure?
4.	Total number of occupants/persons at this location? Z Number of children? Ages?
5.	How long have you lived at this location?
Genei	ral Home Description
6.	Type of Home/Structure (check only one): Single Family Home Duplex \square , Condominium \square , Townhouse \square , Other \square
7.	Home/Structure Description: number of floors
8.	Age of Home/Structure: 1939 years, Not sure/Unknown 🗆
€.	General Above-Ground Home/Structure construction (check all that apply): Wood X. Brick Q, Concrete Q, Cement block Q, Other Q
10.	Foundation Construction (check all that apply): Concrete slab Fieldstone Concrete block

	Elevated above ground/grade
11	Other
11.	
	Public water supply Private well
	Bottled water 🔾
	Other, please specify
12.	
	Yes D No D
	If yes, please describe what you use the well
	for:
13.	Do you have a septic system? Yes \(\omega\) Not used \(\omega\) Unknown \(\omega\)
14.	Do you have standing water outside your home (pond, ditch, swale)? Yes O No
Ras	ement Description, please check appropriate boxes.
	ou do not have a basement go to question 23.
AL Y	go to question 25.
15.	Is the basement finished or unfinished o? particul (wi/z = Sinished)
16.	If finished, how many rooms are in the basement?
	How many are used for more than 2 hours/day?
17.	Is the basement floor (check all that apply) concrete Sk tile D, carpeted D, dirt D,
	other□(describe)?
18.	Are the basement walls poured concrete \(\sigma\), cement block \(\sigma\), stone \(\sigma\), wood \(\sigma\), brick \(\sigma\),
	other ?
19.	Does the basement have a moisture problem (check one only)?
	Yes, frequently (3 or more times/yr) □
	Yes, occasionally (1-2 times/yr)
	Yes, rarely (less than 1 time/yr)
	No DA
20.	Does the basement ever flood (check one only)?
	Yes, frequently (3 or more times/yr)
	Yes, occasionally (1-2 times/yr)
	Yes, rarely (less than I time/yr)
	No B
21.	Does the basement have any of the following? (check all that apply) Floor cracks \(\sigma\),
	Wall cracks □, Sump □, Floor drain ⋈, Other hole/opening in floor □
	(describe)

22.	Are any of the following used or stored in the basement (check all that apply) Paint D Paint stripper/remover D Paint thinner D Metal degreaser/cleaner D Gasoline D Diesel fuel D Solvents D Glue D Laundry spot removers D Drain cleaners D Pesticides D	
23.	Have you recently (within the last six months) done any painting or remodeling in your home? Yes No D If yes, please specify what was done, where in the home, and what month: Beganist Ceck CM, ~ Dec '10, fir this 12×12, well, will	ን
24.	Have you installed new carpeting in your home within the last year? Yes \(\bar{\sqrt{\sq}}}}}}}}}}}}}} \signt{\sqrt{\sqrt{\sqrt{\sqrt{\sq}}}}}}}}}}}}}}}}}}}}}}}}}}}}}}}}}}}}	
25.	Do you regularly use or work in a dry cleaning service (check only one box)? Yes, use dry-cleaning regularly (at least weekly) Yes, use dry-cleaning infrequently (monthly or less) Yes, work at a dry cleaning service No No	
26.	Does anyone in your home use solvents at work? Yes If yes, how many persons No II If no, go to question 28	
27.	If yes for question 26 above, are the work clothes washed at home? Yes \(\sigma\) No \(\sigma\)	
28.	Where is the washer/dryer located? Basement Upstairs utility room Kitchen Garage Use a Laundromat Other, please specify Other	
29.	If you have a dryer, is it vented to the outdoors? Yes 🜠 No 🗆	
30.	What type(s) of home heating do you have (check all that apply) Fuel type: Gas A Oil D, Electric D, Wood D, Coal D, Other Heat conveyance system: Forced hot air A Forced hot water D Steam D Radiant floor heat D Wood stove D Coal furnace D Fireplace D Other	

31.	Do you have air conditioning? Yes No Q. If yes, please check the appropriate type(s) Central air conditioning
	Window air conditioning unit(s)□
32.	Other , please specify Do you use any of the following? Room fans , Ceiling fans , Attic fan Do you ventilate using the fan-only mode of your central air conditioning or forced air heating system? Yes No roce
33.	Has your home had termite or other pesticide treatment: Yes \(\sigma\) No \(\sigma\) Unknown \(\sigma\) If yes, please specify type of pest controlled, and approximate date of service
34.	Water Heater Type: Gas ♀ Electric □, By furnace □, Other
	Water heater location: Basement ♥ Upstairs utility room □, Garage □, Other □ (please describe)
35.	What type of cooking appliance do you have? Electric → Gas □, Other
36.	Is there a stove exhaust hood present? Yes \(\sigma\) No \(\sigma\) Does it vent to the outdoors? Yes \(\sigma\) No \(\sigma\)
37.	Smoking in Home: None □, Rare (only guests)□, Moderate (residents light smokers) Heavy (at least one heavy smoker in household)□
38.	If yes to above, what do they smoke? Cigarettes Cigars C Pipe C Other C
39.	Do you regularly use air fresheners? Yes 📜 No 🚨
40.	Does anyone in the home have indoor home hobbies of crafts involving: None Heating , soldering , welding , model glues , paint , spray paint, wood finishing , Other Please specify what type of hobby:
41.	General family/home use of consumer products (please circle appropriate): Assume that Never = never used, Hardly ever = less than once/month, Occasionally = about once/month, Regularly = about once/week, and Often = more than once/week.
Produ	ct Frequency of Use
Spray	on deodorant Never Hardly ever Occasionally Regularly Often

Aeros	sol deodorizers	Never	Hardly ever	Occasionally	Regularly	Often	
Insec	ticides	Never	Hardly ever	Occasionally	Regularly	Often	
Disin	fectants	Never	Hardly ever (Occasionally	Regularly	Often	
(Ques	stion 41, continued)	Frequenc	y of Use				
Wind	ow cleaners	Never	Hardly ever	Occasionally	Regularly	Often	
Spray	on oven cleaners	Never	Hardly ever	Occasionally	Regularly	Often	
Nail p	oolish remover	Never	Hardly ever	Occasionally	Regularly	Often	
Hair s	ргауз	Never	Hardly ever	Occasionally	Regularly	Often	
42.	Please check week Dusting (34) Dry sweeping (36) Vacuuming (36) Polishing (furnitur Washing/waxing f Other (12)	e, etc) 🗆 🖊	1 month	ces:			
43.	Other comments:						

Date	4-26-11
1.	Name:
	Address: 2614 E. 45 ST., W'100
	Home Phone: Work Phone:
2.	What is the best time to call to speak with you? At: Work □ or Home □?
3.	Are you the Owner . Renter . Other . (please specify) of this Home/Structure?
4.	Total number of occupants/persons at this location?
5.	How long have you lived at this location?
Gene	ral Home Description
6.	Type of Home/Structure (check only one): Single Family Home \square , Duplex \square , Condominium \square , Townhouse \square , Other \square
7.	Home/Structure Description: number of floors Basement? Yes No C Crawl Space? Yes No No I If Yes, under how much of the house's area? 100%
8.	Age of Home/Structure: years, Not sure/Unknown
9.	General Above-Ground Home/Structure construction (check all that apply): Wood , Brick , Concrete , Cement block , Other .
10.	Foundation Construction (check all that apply): Concrete slab Fieldstone Concrete block

	Other
11.	
	Public water supply
	Private well
	Bottled water 🖸
	Other, please specify
12.	
	Yes No 🔏
	If yes, please describe what you use the well
	for:
13.	Do you have a septic system? Yes No Not used Unknown U
14.	Do you have standing water outside your home (pond, ditch, swale)? Yes O No
ъ.	A TO COLUMN TO THE COLUMN TO T
	ement Description, please check appropriate boxes.
11 ye	ou do not have a basement go to question 23.
15.	Is the basement finished or unfinished \(\frac{1}{2} \)?
16.	If finished, how many rooms are in the basement?
10000000	How many are used for more than 2 hours/day?
17.	Is the basement floor (check all that apply) concrete M. tile \(\omega\), carpeted \(\omega\), dirt \(\omega\).
	other□(describe)?
18.	other□(describe)? Are the basement walls poured concrete □, cement block ⋈, stone □, wood □, brick □,
	omera
19.	Does the basement have a moisture problem (check one only)?
	Yes, frequently (3 or more times/yr)
	Yes, occasionally (1-2 times/yr)
	Yes, rarely (less than 1 time/yr)
	No)S
20.	Does the basement ever flood (check one only)?
	Yes, frequently (3 or more times/yr) □
	Yes, occasionally (1-2 times/yr) □
	Yes, rarely (less than 1 time/yr)
	No X
21.	Does the basement have any of the following? (check all that apply) Floor cracks Q,
	Wall cracks □, Sump □, Floor drain ☒, Other hole/opening in floor □
	(describe)

22.	Are any of the following used or stored in the basement (check all that apply) Paint Paint stripper/remover Paint thinner	
	Metal degreaser/cleaner □ Gasoline □ Diesel fuel □ Solvents □ Glue □	
	Laundry spot removers Drain cleaners Pesticides Pesticides	
23.	Have you recently (within the last six months) done any painting or remodeling in yo home? Yes \(\sigma\) No \(\sigma\) If yes, please specify what was done, where in the home, and what month:	ur
24.	Have you installed new carpeting in your home within the last year? Yes No Market 1 Yes, when and where?	
25.	Do you regularly use or work in a dry cleaning service (check only one box)? Yes, use dry-cleaning regularly (at least weekly) Yes, use dry-cleaning infrequently (monthly or less) Yes, work at a dry cleaning service No	
26.	Does anyone in your home use solvents at work? Yes I If yes, how many persons No If no, go to question 28	
27.	If yes for question 26 above, are the work clothes washed at home? Yes 🔾 No 🔾	
28.	Where is the washer/dryer located? Basement A Upstairs utility room Kitchen Garage Use a Laundromat Other, please specify Other	
29.	If you have a dryer, is it vented to the outdoors? Yes 🦻 No 🗆	
30.	What type(s) of home heating do you have (check all that apply) Fuel type: Gas A, Oil , Electric , Wood , Coal , Other Heat conveyance system: Forced hot air A Forced hot water Steam Radiant floor heat Wood stove Coal furnace Fireplace Other	

31.	Do you have air conditioning? Yes No . If yes, please check the appropriate type(s) Central air conditioning
	Window air conditioning unit(s)
32.	Other , please specify Do you use any of the following? Room fans , Ceiling fans , Attic fan Do you ventilate using the fan-only mode of your central air conditioning or forced air heating system? Yes No
33.	Has your home had termite or other pesticide treatment: Yes \(\sigma\) No \(\sigma\) Unknown \(\sigma\) If yes, please specify type of pest controlled,
34.	Water Heater Type: Gas ≒ Electric □, By furnace □, Other
	Water heater location: Basement ⋈, Upstairs utility room □, Garage □, Other □ (please describe)
35.	What type of cooking appliance do you have? Electric □, Gas ♥ Other □
36.	Is there a stove exhaust hood present? Yes No Does it vent to the outdoors? Yes No D
37.	Smoking in Home: None □, Rare (only guests)□, Moderate (residents light smokers)□, Heavy (at least one heavy smoker in household)□
38.	If yes to above, what do they smoke? Cigarettes A Cigars C Pipe C Other C
	Fipe G Other G
39.	Do you regularly use air fresheners? Yes No 🗆
40.	Does anyone in the home have indoor home hobbies of crafts involving: None ★ Heating □, soldering □, welding □, model glues □, paint □, spray paint, wood finishing □, Other □ Please specify what type of hobby:
41.	General family/home use of consumer products (please circle appropriate): Assume that Never = never used, Hardly ever = less than once/month, Occasionally = about once/month, Regularly = about once/week, and Often = more than once/week.
Produ	ct Frequency of Use
Spray	on decodorant Never Hardly ever Occasionally Regularly Often

Aeros	sol deodorizers	Never	Hardly ever	Occasionally	Regularly	Often	
Insect	ticides	Never	Hardly ever	Occasionally	Regularly	Often	
Disin	fectants	Never	Hardly ever	Occasionally	Regularly	Often	
(Ques	tion 41, continued)	Frequenc	y of Use				
Wind	ow cleaners	Never	Hardly ever	Occasionally	Regularly	Often	
Ѕргау	on oven cleaners	Never	Hardly ever	Occasionally	Regularly	Often	
Nail p	olish remover	Never	Hardly ever	Occasionally	Regularly	Often	
Hair sprays Never		Hardly ever	Occasionally	Regularly	Often		
42.	Please check week Dusting V Dry sweeping V Vacuuming V Polishing (furniture Washing/waxing fl Other □	e, etc) 🗖 🚶	/month	ices:			
43.	Other comments: _	- USWE	1810) · · · · · · · · · · · · · · · · · · ·				
	C. C	· · · · · · · · · · · · · · · · · · ·				11.70	

Date	4/27/11
1.	Name: Address: 2620 East 4th Street
	Home Phone: Work Phone:
2.	What is the best time to call to speak with you? 3:30 Manday of Tug-Fr At: Work or Home
3.	Are you the Owner , Renter (please specify) of this Home/Structure?
4.	Total number of occupants/persons at this location? Number of children? O Ages?
5.	Number of children? O Ages? Grandehild 3 days a week How long have you lived at this location? 112 geos
Gene	ral Home Description
6.	Type of Home/Structure (check only one): Single Family Home ✓, Duplex □, Condominium□, Townhouse □, Other □
7.	Home/Structure Description: number of floors Basement? Yes No C Crawl Space? Yes No X If Yes, under how much of the house's area? 100%
8.	Age of Home/Structure: years, Not sure/Unknown X Kash and Kusu
9.	General Above-Ground Home/Structure construction (check all that apply): Wood ♥ Brick □, Concrete □, Cement block □, Other □
10.	Foundation Construction (check all that apply): Concrete slab Fieldstone Concrete block

	Other							
11.	What is the source of your drinking water (check all that apply)?							
111	Public water supply							
	Private well 🔾							
	Bottled water 🔾							
	Other, please specify							
12.	Do you have a private well for purposes other than drinking? Yes No Y							
	If yes, please describe what you use the well							
	for:							
13.	Do you have a septic system? Yes \(\text{N} \) Not used \(\text{U} \) Unknown \(\text{U} \)							
14.	Do you have standing water outside your home (pond, ditch, swale)? Yes \(\sigma\) No.							
1 and 1 and 2 and 2	allow way when it was, 5th down							
	ement Description, please check appropriate boxes.							
II yo	ou do not have a basement go to question 23.							
1.5	Is the basement finished or unfinished ?? If finished, how many rooms are in the basement? I room, 5plx how Tables ? How many are used for more than 2 hours/day? Quench							
15.	Is the basement this ned if or until is ned by							
16.	If timished, now many rooms are in the basement?							
17	How many are used for more than 2 hours/day? Quench							
17.	Is the basement floor (check all that apply) concrete to tile □, carpeted □, dirt □, other □ (describe) ?							
18.	Are the basement walls poured concrete \square , cement block \square , stone \square , wood \square , brick \square ,							
10.	other ?							
19,	Does the basement have a moisture problem (check one only)? Yes, frequently (3 or more times/yr) when it will be the							
	Yes, frequently (3 or more times/yr) when it wis har							
	Yes, occasionally (1-2 times/yr)							
	Yes, rarely (less than 1 time/yr)							
	No 🗆							
20.	Does the basement ever flood (check one only)?							
	Yes, frequently (3 or more times/vr)							
	Yes, occasionally (1-2 times/yr)							
	Yes, occasionally (1-2 times/yr) \(\square\) Yes, rarely (less than I time/yr) \(\square\) Sewo bank up							
	No 🕱							
21	But the beautiful and the following (check all that we had file and \$7.00 Hz.)							
21.	Does the basement have any of the following? (check all that apply) Floor cracks ()							
/	Wall cracks , Sump , Floor drain , Other hole/opening in floor Cracks							
((describe)							
	11 1 E Ha							
50	and a comple of them							

22.	Are any of the following used or stored in the basement (check all that apply) Paint Paint stripper/remover Paint thinner
	Metal degreaser/cleaner ☐ Gasoline ☐ Diesel fuel ☐ Solvents ☐ Glue ☐
	Laundry spot removers Drain cleaners Pesticides
23.	Have you recently (within the last six months) done any painting or remodeling in your home? Yes \(\text{\$\e
24.	Have you installed new carpeting in your home within the last year? Yes \(\sigma\) No \(\sigma\) If yes, when and where?
25.	Do you regularly use or work in a dry cleaning service (check only one box)? Yes, use dry-cleaning regularly (at least weekly) Yes, use dry-cleaning infrequently (monthly or less) Yes, work at a dry cleaning service No
26.	Does anyone in your home use solvents at work? Yes If yes, how many persons degrees. No If no, go to question 28
27	If yes for question 26 above, are the work clothes washed at home? Yes U No U
28.	Where is the washer/dryer located? Basement \(\) \(
29.	If you have a dryer, is it vented to the outdoors? Yes D No
30.	What type(s) of home heating do you have (check all that apply) Fuel type: Gas A. Oil D., Electric D., Wood D., Coal D., Other Heat conveyance system: Forced hot air X Forced hot water D Steam D Radiant floor heat D Wood stove D Coal furnace D Fireplace D
	Other

31.	Do you have air conditioning? Yes No . If yes, please check the appropriate type(s) Central air conditioning
	Window air conditioning unit(s)□ Other □, please specify
32.	Do you use any of the following? Room fans , Ceiling fans , Attic fan Do you ventilate using the fan-only mode of your central air conditioning or forced air heating system? Yes No D 5pm and fall
33.	Has your home had termite or other pesticide treatment: Yes \(\sigma\) No \(\sigma\) Unknown \(\sigma\) If yes, please specify type of pest controlled, and approximate date of service
34.	Water Heater Type: Gas X, Electric □, By furnace □, Other □ Water heater location: Basement X Upstairs utility room □, Garage □, Other □ (please describe)
35.	What type of cooking appliance do you have? Electric □, Gas ☑ Other □
36.	Is there a stove exhaust hood present? Yes \(\sigma\) No \(\sigma\)
37.	Smoking in Home: None □, Rare (only guests)□, Moderate (residents light smokers)□, Heavy (at least one heavy smoker in household) Moderate Moderate
38.	If yes to above, what do they smoke? Cigarettes ☐ Cigars ☐ Pipe ☐ Other ☐
39.	Do you regularly use air fresheners? Yes No O incer 15
40.	Does anyone in the home have indoor home hobbies of crafts involving: None Heating \square , soldering \square , welding \square , model glues \square , paint \square , spray paint, wood finishing \square , Other \square Please specify what type of hobby:
41.	General family/home use of consumer products (please circle appropriate): Assume that Never = never used, Hardly ever = less than once/month, Occasionally = about once/month, Regularly = about once/week, and Often = more than once/week.
Produ	ct Frequency of Use
Spray-	on deodorant Never Hardly ever Occasionally Regularly Often

Aero	sol deodorizers	Never	Hardly ever	Occasionally	Regularly	Often
Insec	ticides	Never	Hardly ever	Occasionally	Regularly	Often
Disir	fectants	Never	Hardly ever	Occasionally	Regularly	Often
(Que <u>Prod</u> i	stion 41, continued)	Freque	ncy of Use			
Wind	ow cleaners	Never	Hardly ever	Octasionally	Regularly	Often
Spray	-on oven cleaners	Never	Hardly ever	Occasionally	Regularly	Often
Nail _I	oolish remover	Never	Hardly ever	Occasionally	Regularly	Often
Hair sprays		Never	Hardly ever	Occasionally (Regularly	Often
42.	Please check weekly Dusting Dry sweeping Vacuuming Polishing (furniture Washing/waxing floo Other Other	, etc) 🖸		ices:		
43.	Other comments:					48392
	1. T					
			~			

Date:	4/28/2011
1.	Name:_
	Address: 2435 E 4th St
	Home Phone: Work Phone:
2.	What is the best time to call to speak with you? At: Work □ or Home □?
3.	Are you the Owner A, Renter D, Other D (please specify) of this Home/Structure?
4.	Total number of occupants/persons at this location? 2 Number of children? Ages?
5.	How long have you lived at this location? 1968 - 43475
Gener	al Home Description
6.	Type of Home/Structure (check only one): Single Family Home , Duplex , Condominium, Townhouse, Other
7.	Home/Structure Description: number of floors 2 Basement? Yes No D Crawl Space? Yes No D Min(If Yes, under how much of the house's area? 160 %
8.	Age of Home/Structure: Bult 1924 years, Not sure/Unknown [
9.	General Above-Ground Home/Structure construction (check all that apply): Wood □, Brick □, Concrete □, Cement block ☒, Other □
10.	Foundation Construction (check all that apply): Concrete slab Fieldstone Concrete block

	Other		
11.			
	Public water supply		
	Private well		
	Bottled water 3		
	Other, please specify		
12.	Do you have a private well for purposes other than drinking? Yes □ No ☒		
	If yes, please describe what you use the well for:		
13.	Do you have a septic system? Yes □ No ◘ Not used □ Unknown □		
14.	Do you have standing water outside your home (pond, ditch, swale)? Yes 🔾 No 💆		
	ement Description, please check appropriate boxes. ou do not have a basement go to question 23.		
15.	Is the basement finished ☑ or unfinished ☐?		
16.	If finished, how many rooms are in the basement? 3 How many are used for more than 2 hours/day?		
17.	Is the basement floor (check all that apply) concrete √1, tile √2, carpeted √2, dirt □ other □ (describe) ?		
18.	Are the basement walls poured concrete \square , cement block \square , stone \square , wood \square , brick \square , other \square was based over \square ?		
19.	Does the basement have a moisture problem (check one only)?		
	Yes, frequently (3 or more times/yr) \(\sigma\) Yes, occasionally (1-2 times/yr) \(\sigma\) Yes, rarely (less than 1 time/yr) \(\sigma\)		
	Yes, occasionally (1-2 times/yr) august of		
	Yes, rarely (less than 1 time/yr) □ No □		
20.	Does the basement ever flood (check one only)?		
	Yes, frequently (3 or more times/yr)		
	Yes, occasionally (1-2 times/yr) □		
	Yes, rarely (less than 1 time/yr)		
	No D		
21.	Does the basement have any of the following? (check all that apply) Floor cracks □, Wall cracks □, Sump □, Floor drain ☒, Other hole/opening in floor □ (describe)		

22.	Are any of the following used or stored in the basement (check all that apply) Paint Paint stripper/remover Paint thinner Paint thinner					
	Metal degreaser/cleaner ☐ Gasoline ☐ Diesel fuel ☐ Solvents ☐ Glue ☐ Laundry spot removers ☐ Drain cleaners ☐ Pesticides ☐					
23.	Have you recently (within the last six months) done any painting or remodeling in your home? Yes \(\sigma\) No \(\sigma\) If yes, please specify what was done, where in the home, and what month:					
24.	Have you installed new carpeting in your home within the last year? Yes □ No ☑ If yes, when and where?					
25.	Do you regularly use or work in a dry cleaning service (check only one box)? Yes, use dry-cleaning regularly (at least weekly) Yes, use dry-cleaning infrequently (monthly or less) Yes, work at a dry cleaning service No					
26.	Does anyone in your home use solvents at work? Yes D If yes, how many persons No X If no, go to question 28					
27.	If yes for question 26 above, are the work clothes washed at home? Yes 🗆 No 🗅					
28.	Where is the washer/dryer located? Basement Upstairs utility room Kitchen Garage Use a Laundromat Other, please specify					
29.	If you have a dryer, is it vented to the outdoors? Yes 🔯 No 🗆					
30.	What type(s) of home heating do you have (check all that apply) Fuel type: Gas A, Oil , Electric , Wood , Coal , Other Heat conveyance system: Forced hot air Forced hot water Steam Radiant floor heat Wood stove Coal furnace Fireplace Other					

31.	Do you have air conditioning? Yes \(\overline{\Delta}\) No \(\Overline{\Over			
	Window air conditioning unit(s)□			
32.	Other \(\sigma\), please specify Do you use any of the following? Room fans \(\sigma\), Ceiling fans \(\sigma\), Attic fan \(\sigma\) Do you ventilate using the fan-only mode of your central air conditioning or forced air heating system? Yes \(\sigma\) No \(\sigma\)			
33.	Has your home had termite or other pesticide treatment: Yes 12. No 12. Unknown 12. If yes, please specify type of pest controlled, Black ant 3 deck & outside home and approximate date of service.			
34.	Water Heater Type: Gas ☑, Electric □, By furnace □, Other			
	Water heater location: Basement ♥ Upstairs utility room □, Garage □, Other □ (please describe)			
35.	What type of cooking appliance do you have? Electric d, Gas Q, Other			
36.	Is there a stove exhaust hood present? Yes \(\sigma\) No \(\sigma\) Does it vent to the outdoors? Yes \(\sigma\) No \(\sigma\)			
37.	 Smoking in Home: None M. Rare (only guests)□, Moderate (residents light smokers)□, Heavy (at least one heavy smoker in household)□ 			
38.	If yes to above, what do they smoke? Cigarettes □ Cigars □ Pipe □ Other □			
39.	Do you regularly use air fresheners? Yes 🛛 No 🗆			
40.	Does anyone in the home have indoor home hobbies of crafts involving: None ☐ Heating ☐, soldering ☐, welding ☐, model glues ☐, paint ☐, spray paint, wood finishing ☐, Other ☐ Please specify what type of hobby:			
41.	General family/home use of consumer products (please circle appropriate): Assume that Never = never used, Hardly ever = less than once/month, Occasionally = about once/month, Regularly = about once/week, and Often = more than once/week.			
Produ	ct Frequency of Use			
Spray-	on deodorant Never Hardly ever Occasionally Regularly Often			

Aerosol deodorizers	Never	Hardly ever	Occasionally	Regularly	Often
Insecticides	Never	Hardly ever	Occasionally	Regularly	Often
Disinfectants	Never	Hardly ever	Occasionally	Regularly	Often
(Question 41, continued) Product	Frequenc	y of Use	y B		
Window cleaners	Never	Hardly ever	Occasionally	Regularly	Often
Spray-on oven cleaners	Never	Hardly ever	Occasionally	Regularly	Often ~ Z4/mo
Nail polish remover	Never	Hardly ever (Occasionally	Regularly	Often
Hair sprays	Never	Hardly ever	Occasionally	Regularly	Often
Please check week Dusting A Dry sweeping A Vacuuming B Polishing (furniture Washing) waxing flother D	•. etc) □	-zdmi	ices:		g 81
43. Other comments:	10 10-1 11.3	15 - 172 - 153 - 1		- XX - X2 X	
	-			- 108 197 1944-19 56	
				ATTER STATE OF THE	
	3///			<u> </u>	9, 27.5
		72	• • • • • • • • • • • • • • • • • • • •		4 **

Date	: 4/2S/2011
1.	Name:_
	Address: W44 E 44484
	Home Phone: Work Phone:
2.	What is the best time to call to speak with you? At: Work □ or Home □?
3.	Are you the Owner , Renter , Other (please specify) of this Home/Structure?
4.	Total number of occupants/persons at this location? 4 Number of children? 3 Ages? 17.10,10
5.	How long have you lived at this location?
Gene	ral Home Description
6.	Type of Home/Structure (check only one): Single Family Home ⋈, Duplex □, Condominium□, Townhouse □, Other □
7.	Home/Structure Description: number of floors 2+1077 Basement? Yes \(\text{No} \) No \(\text{No} \) Crawl Space? Yes \(\text{No} \) No \(\text{No} \) If Yes, under how much of the house's area?%
8.	Age of Home/Structure:years, Not sure/Unknown
9.	General Above-Ground Home/Structure construction (check all that apply): Wood \(\Quad \text{, Brick } \Quad \text{, Concrete } \Quad \text{, Cement block } \Quad \text{, Other } \Quad \(\text{\(\left\)} \) Yes-weighted
10.	Foundation Construction (check all that apply): Concrete slab

	Elevated above ground/grade
11.	Other What is the source of your drinking water (check all that apply)?
11.	Public water supply
	Private well
	Bottled water 🔾
	Other, please specify
-	
12.	Do you have a private well for purposes other than drinking?
	Yes No No
	If yes, please describe what you use the well
	for:
13.	Do you have a septic system? Yes Do Not used D Unknown &
14.	Do you have standing water outside your home (pond, ditch, swale)? Yes \(\sigma\) No \(\forall \)
	ement Description, please check appropriate boxes.
If yo	ou do not have a basement go to question 23.
15.	Is the basement finished \square or unfinished \square ?
16.	If finished, how many rooms are in the basement? 2
	How many are used for more than 2 hours/day?
17.	Is the basement floor (check all that apply) concrete \(\sigma\), tile \(\sigma\), carpeted \(\sigma\), dirt \(\sigma\), other \(\sigma\) (describe)?
18.	Are the basement walls poured concrete \square , cement block \square , stone \square , wood \square , brick \square , other \square
19.	Does the basement have a moisture problem (check one only)?
	Yes, frequently (3 or more times/yr)
	Yes, occasionally (1-2 times/yr)
	Yes, rarely (less than 1 time/yr)
	No 🗷
20.	Does the basement ever flood (check one only)?
	Yes, frequently (3 or more times/yr)
	Yes, occasionally (1-2 times/yr) □
	Yes, rarely (less than I time/yr)
	No X
21.	Does the basement have any of the following? (check all that apply) Floor cracks Q,
0	Wall cracks □, Sump □, Floor drain ☒, Other hole/opening in floor □
	(describe)

Are any of the following used or stored in the basement (check all that apply) Paint Paint stripper/remover Paint thinner Metal degreaser/cleaner Gasoline Diesel fuel Solvents Glue
Have you recently (within the last six months) done any painting or remodeling in your home? Yes \(\sigma\) No \(\sigma\) If yes, please specify what was done, where in the home, and what month:
Have you installed new carpeting in your home within the last year? Yes□ No♥ If yes, when and where?
Do you regularly use or work in a dry cleaning service (check only one box)? Yes, use dry-cleaning regularly (at least weekly) Yes, use dry-cleaning infrequently (monthly or less) Yes, work at a dry cleaning service No
Does anyone in your home use solvents at work? Yes D If yes, how many persons No M If no, go to question 28
If yes for question 26 above, are the work clothes washed at home? Yes 🔾 No 🔾
Where is the washer/dryer located? Basement Upstairs utility room Kitchen Garage Use a Laundromat Other, please specify
If you have a dryer, is it vented to the outdoors? Yes \(\mathbb{Q}\) No \(\mathbb{Q}\) on where
What type(s) of home heating do you have (check all that apply) Fuel type: Gas \(\text{O}\), Oil \(\text{O}\), Electric \(\text{V}\), Wood \(\text{O}\), Coal \(\text{O}\), Other Heat conveyance system: Forced hot air \(\text{O}\) Steam \(\text{O}\) Radiant floor heat \(\text{O}\) Wood stove \(\text{O}\) Coal furnace \(\text{O}\) Fireplace \(\text{O}\) Other

31.	Do you have air conditioning? Yes No . If yes, please check the appropriate type(s) Central air conditioning . Window air conditioning unit(s).
	Other \(\sigma\), please specify
32.	Do you use any of the following? Room fans , Ceiling fans , Attic fan Do you ventilate using the fan-only mode of your central air conditioning or forced air heating system? Yes No D
33.	Has your home had termite or other pesticide treatment: Yes \(\sigma\) No \(\sigma\) Unknown \(\sigma\) If yes, please specify type of pest controlled, and approximate date of service
34.	Water Heater Type: Gas □, Electric □, By furnace □, Other □
35.	What type of cooking appliance do you have? Electric ¼, Gas □, Other □
36.	Is there a stove exhaust hood present? Yes \(\overline{\pi}\) No \(\overline{\pi}\) Does it vent to the outdoors? Yes \(\overline{\pi}\) No \(\overline{\pi}\) the third to the outdoors?
37.	Smoking in Home: None , Rare (only guests), Moderate (residents light smokers), Heavy (at least one heavy smoker in household)
38.	If yes to above, what do they smoke? Cigarettes □ Cigars □ Pipe □ Other □
39.	Do you regularly use air fresheners? Yes No alut
40.	Does anyone in the home have indoor home hobbies of crafts involving: None \(\sigma\) Heating \(\sigma\), soldering \(\sigma\), welding \(\sigma\), model glues \(\sigma\), paint \(\sigma\), spray paint, wood finishing \(\sigma\), Other \(\sigma\) Please specify what type of hobby:
41.	General family/home use of consumer products (please circle appropriate): Assume that Never = never used, Hardly ever = less than once/month, Occasionally = about once/month, Regularly = about once/week, and Often = more than once/week.
D 1	The second secon
Produ	Frequency of Use
Spray	on decdorant (Never Hardly ever Occasionally Regularly Often

					_	
Aeros	ol deodorizers	Never	Hardly ever	Occasionally	Regularly	Often
Insect	ricides	Never	Hardly ever	Occasionally	Regularly	Often
Disini	fectants	Never	Hardly ever	Occasionally	Regularly	Often
(0)	tion 41 continued)				2	
Produ	tion 41, continued)	Frequen	cy of Use			
Windo	ow cleaners	Never	Hardly ever	Occasionally	Regularly	Often
Spray	on oven cleaners	Never	Hardly ever	Occasionally	Regularly	Often
Nail p	olish remover	Never	Hardly ever	Occasionally	Regularly	Often
Hair s	prays	Never	Hardly ever (Occasionally	Regularly	Often
42.	Please check week Dusting Dry sweeping Vacuuming Polishing (furniture Washing by waxing fl	78		ices:		
43.	Other comments: _			- I - F		
				***********	A #44 11	



Appendix E

Completed Field Forms



Name of Resident:

Arrival Checklist

Date of Visit: 4 24 201	<u> </u>	
Time of Arrival:	Time of De	parture: \\20
Names of Terracon Represe	ntatives: Jhn b	nmenky
1922	yen clay	icuj
1 Introduce Terracon Re) presentatives and Show	w Terracon Identification
✓ Verify identity of residence of the second of the s	lent; confirm authority	to allow entry
X Explain purpose of vis	it (check as appropriat	e):
<u>⊀</u> Sample Port Ins	tallation	Sub-Slap Vapor Sampling
Completion of (Questionnaire	Indoor Air Sampling Canister Installation
Indoor Air Sam Removal	pling Canister	Outdoor Air Sampling
Other [Explain:		
Explain if follow-up v appropriate.	isits will occur and ver	ify date/time of follow-up visits as
Date of Follow-Up Vi	sit: 4/28 6,4/29	=
Time of Follow-Up V	isit: <u>9:00 am</u>	
Items Completed as Noted:		
Donney UClauce	y	
Tefracon Representative Sign	ature	
Resident Signature		



Name of Resident:

Date and Time of Visit: 4 201 ; 1030mm

Sampling Port Installation Checklist

1	Work with resident to identify mutually agreeable area to install port in lowest occupied level of home.
Precau	ations to be taken to protect floor coverings, if applicable:
S	
X	Install sampling port in accordance with work plan procedures.
\times	Clean up any debris.
X	Invite homeowner to view installed port and explain necessary precautions to prevent disturbance of it while it cures.
Items	Completed as Noted:
Ju	con Representative Signature
rerrac	con kepresentative signature
Reside	ent Signature



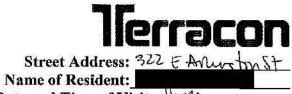


Arrival Checklist

Date o	f Visit: 4 28 (20)
Time o	of Arrival: Time of Departure: 435
Names	of Terracon Representatives: John bruneye
	Ju dancy
	Introduce Terracon Representatives and Show Terracon Identification
	Verify identity of resident; confirm authority to allow entry
X	Explain purpose of visit (check as appropriate):
	Sample Port Installation Sub-Slap Vapor Sampling
	Completion of Questionnaire Indoor Air Sampling Canister Installation
	Indoor Air Sampling Canister Outdoor Air Sampling Removal
	Other [Explain:
7	Explain if follow-up visits will occur and verify date/time of follow-up visits as appropriate.
	Date of Follow-Up Visit: 4/20/201
	Time of Follow-Up Visit:
Items (Completed as Noted:
\bigcup	enny Mlancer
Terrad	on Representative Signature /
Reside	at Signature

-5-





Date and Time of Visit: 4/28/201

Indoor Air Sampling Canister Installation Checklist

- 2	
X	Verify that heating/cooling system has been operating for at least 24 hours and that doors and windows have only been opened incidentally.
<u>×</u>	Work with homeowner to identify an unobtrusive spot for canister to be placed consistent with work plan requirements.
<u>\</u>	Explain precautions to be taken while the canister collects the samples.
X	Arrange for visit to remove canister:
•	Date: 4/29/201
	Time:900
Items (Completed as Noted:
Terrac	on Representative Signature
Reside	entext to be a time of the control o

-7-

VAPOR INTRUSION CHARACTERIZATION WORK PLAN CHAMBERLAIN MANUFACTURING CORPORATION FORMER FACILITY AT 550 ESTHER STREET WATERLOO, IOWA

Soil Vapor/Indoor Air Sampling Information Form

	0.55	minus eres	
Residence ID:	4	Address:	322 E Avlington
Sample ID:	1A-4-B	Location:	322 E Av Ingden Boxment etility in N shelves
Date:	4/28/4	Time:	915
Sampler(s):	ito kne	Summa Canister ID:	104391 /2423
Flow Controller ID:	K423	Flow Controller Rate Setting (cc/min):	24hr
Start Time:	915 4/28/11	Finish Time:	4/29/11 14:50
Pre-Sampling Vacuum (in Hg):	-29	Post-Sampling Vacuum (in Hg):	-2
Organic Vapor Reading (ppm):	-	PID used:	
Summa Canister went to Ambient?	Yes (No)	Method:	Grab
Sketch:		01+17 · 110-	W=14-01 Howhaz
NA	25'	20'-1 X	W=H70 Harter F=furrace C=chimney Rascment
0:82me &:pN	1 \	30'	

DO NOT TOUCH

SAMPLE IN PROGRESS

TERRACON PROJECT	NUMBER: 07107070
PROJECT LOCATION:	322 E Aveluator St

DATE INSTALLED: 4/28/2011 TIME INSTALLED:

ADDRESS INSTALLED: Same

SAMPLE ID: 1A-4-B

SAMPLE LOCATION: Buscure

CONTROLLER#: 1423 **DEVICE #: 0434**

LAB ID #:

RETRIEVAL DATE: 4/201

PLANNED RETRIEVAL TIME:

ACTUAL RETRIEVAL TIME: 94-1450

TERRACON REPRESENTATIVE: MARCON REPRESENTATIVE:

COMMENTS:



FOR INFORMATION CALL 563-355-0702

870 40th Avenue Bettendorf, Iowa 52722

VAPOR INTRUSION CHARACTERIZATION WORK PLAN CHAMBERLAIN MANUFACTURING CORPORATION FORMER FACILITY AT 550 ESTHER STREET WATERLOO, IOWA

Soil Vapor/Indoor Air Sampling Information Form

Residence ID:	Ц	Address:	322 E. Arlungton		
Sample ID:	1A-4-1	Location:	Bar Win Kutchen duning		
Date:	4/28/11	Time:	q K		
Sampler(s):	Abl fine	Summa Canister ID:	12340		
Flow Controller ID:	15 K. Z. 34	Flow Controller Rate Setting (cc/min):	74hv		
Start Time:	918 4/24/11	Finish Time:	14:52 4/29/11		
Pre-Sampling Vacuum (in Hg):	-30	Post-Sampling Vacuum (in Hg):	-3 碁		
Organic Vapor Reading (ppm):		PID used:			
Summa Canister went to Ambient?	Yes (No	Method:	Grab		
Sketch: Wein level					

DO NOT TOUCH

SAMPLE IN PROGRESS

TERRACON PROJECT NUMBER: 07107070
PROJECT LOCATION: 322 & Artuston St
DATE INSTALLED: 428(20)
TIME INSTALLED: ' 918
ADDRESS INSTALLED: Same
SAMPLE ID: \A - 4-\
SAMPLE LOCATION: Box 6/m to telun & during vom
,
DEVICE #: 12340 CONTROLLER#: V-734
LAB ID #:
RETRIEVAL DATE: 4/20/201
PLANNED RETRIEVAL TIME:
ACTUAL RETRIEVAL TIME: 432
TERRACON REPRESENTATIVE:
0
COMMENTS:



FOR INFORMATION CALL 563-355-0702

870 40th Avenue Bettendorf, Iowa 52722

202200	- ri	*	
Residence ID:	4	Address:	322 E. Arlinot
Sample ID:	AA-4	Location:	Bookupur) - Wad &
Date:	4/28/11	Time:	124
Sampler(s):	x6/bnc	Summa Canister ID:	12264
Flow Controller ID:	K188	Flow Controller Rate Setting (cc/min):	24hr
Start Time:	929 4/28/11	Finish Time:	4/24/11 14:59
Pre-Sampling Vacuum (in Hg):	-30	Post-Sampling Vacuum (in Hg):	-1.5
Organic Vapor Reading (ppm):		PID used:	
Summa Canister went to Ambient?	Yes / No	Method:	TU-15 Grab
Comments:	Key# 115019		
Sketch:	Hon	r se	N-
	<u> </u>		
0: Sum	T	No.	

DO NOT TOUCH

SAMPLE IN PROGRESS

WEDD A CONTRROL TO CONTRACT OF THE	7.5%
TERRACON PROJECT NUMBER: 07107020	
PROJECT LOCATION: 322 E Avlusting St	
DATE INSTALLED: 4 28/201)	
TIME INSTALLED: 929	
ADDRESS INSTALLED: Surve	***
SAMPLE ID: AA-4	71 28 77
SAMPLE LOCATION: De Charget Stanger	W 2 5 W
DEVICE #: \2764 CONTROLLER#: \\	ζ
LAB ID #:	\$2.
RETRIEVAL DATE: 4/20/2011	
PLANNED RETRIEVAL TIME: 7 7	
ACTUAL RETRIEVAL TIME: 1459	
TERRACON REPRESENTATIVE: Www	
0,00	a - Wi
COMMENTS:	

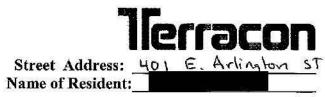


FOR INFORMATION CALL 563-355-0702 870 40th Avenue Bettendorf, Iowa 52722



Date of Visit: 4 29 2011
Time of Arrival: 900 Time of Departure: 1500
Names of Terracon Representatives: yen claucy
Introduce Terracon Representatives and Show Terracon Identification
Verify identity of resident; confirm authority to allow entry
Explain purpose of visit (check as appropriate):
Sample Port Installation Sub-Slap Vapor Sampling
Completion of Questionnaire Indoor Air Sampling Canister Installation
Indoor Air Sampling Canister Removal *Z Outdoor Air Sampling Pickup
Other [Explain:
Explain if follow-up visits will occur and verify date/time of follow-up visits as appropriate.
Date of Follow-Up Visit:
Time of Follow-Up Visit:
Items Completed as Noted:
Terracon Representative Signature
Resident Signature

Residence ID:	4	Address:	322 E Arlungton
Sample ID:	SS-4	Location:	322 E Arlungton Waterloo
Date:	4/29/2011	Time:	900
Sampler(s):	mic ; me	Summa Canister ID:	OP
Flow Controller ID:	- 19	Flow Controller Rate Setting (cc/min):	
Start Time:	969	Finish Time:	944
Pre-Sampling Vacuum (in Hg):	-28	Post-Sampling Vacuum (în Hg):	-1.5
Organic Vapor Reading (ppm):	emblent: 0.1ppm SS: 0.5ppm	PID used:	Minikat 3000
Summa Canister went to Ambient?	Yes / No	Method: -TO 15	Grab
Comments:			
Sketch:			
20			
ið.			



Date o	f Visit: 14-26-11		500
Time o	of Arrival: 1:30	Time of Departure:	1750
Names	of Terracon Representatives:	Justin Ennall Mark Anders	
	37.	Mark Huder	~
$\frac{}{}$	Introduce Terracon Representat	ves and Show Terracon Id	lentification
$\sqrt{}$	Verify identity of resident; con-	rm authority to allow entr	у
-	Explain purpose of visit (check	as appropriate):	
	Sample Port Installation	Sub-	Slap Vapor Sampling
	Completion of Questions		oor Air Sampling Canister allation
	Indoor Air Sampling Ca Removal	ister Outdo	oor Air Sampling
Λ	Other [Explain:		
	Explain if follow-up visits will appropriate.		of follow-up visits as
	Date of Follow-Up Visit: 4	26/11	
	Time of Follow-Up Visit:	30 PM	
Items (Completed as Noted:		
	gul and		
2	on Representative Signature		



Street Address: 401 E. Atlington ST Name of Resident:

Date and Time of Visit: 4-26-11 e 1:30

Sampling Port Installation Checklist

	Work with resident to identify mutually agreeable area to install port in lowest occupied level of home.
Precau	ations to be taken to protect floor coverings, if applicable:
2	
70 m	
100	
	Install sampling port in accordance with work plan procedures.
$\sqrt{}$	Clean up any debris.
9 <u>2 </u>	Invite homeowner to view installed port and explain necessary precautions to prevent disturbance of it while it cures.
Items	Completed as Noted:
	Opti Edl
Terrac	con Representative Signature
Reside	ent Signature

-6-



\/	Arrival Checklist

41201
Date of Visit: 4/28/11
Time of Arrival: 1735 Time of Departure: 1835
Names of Terracon Representatives: Rob Bergman
Justin Enwall
Introduce Terracon Representatives and Show Terracon Identification
Verify identity of resident; confirm authority to allow entry
Explain purpose of visit (check as appropriate):
Sample Port Installation Sub-Slap Vapor Sampling
Completion of Questionnaire Indoor Air Sampling Canister Installation
Indoor Air Sampling Canister Outdoor Air Sampling Removal
Other [Explain:]
Explain if follow-up visits will occur and verify date/time of follow-up visits as appropriate.
Date of Follow-Up Visit:
Time of Follow-Up Visit:
Items Completed as Noted:
Terracon Representative Signature
Résident Signature

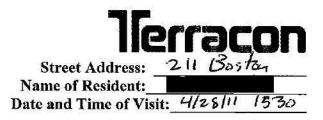


Residence ID:	6	Address:	401 E Arlington St.
Sample ID:	55-6	Location:	Westerloo, IA
Date:	4/28/11	Time:	1735
Sampler(s):	RPB/JME	Summa Canister ID:	21639
Flow Controller ID:	168	Flow Controller Rate Setting (cc/min):	Zoo colmin
Start Time:	1745	Finish Time:	1828
Pre-Sampling Vacuum (in Hg):	-28	Post-Sampling Vacuum (in Hg):	- 1
Organic Vapor Reading (ppm):	21 (0.0 pm)	PID used:	WBL Mini Rae # 2
Summa Canister went to Ambient?	Yes / No	Method:	Grab
Comments:	10 cc from flow cont	SSMP with 50 miller 0.0	opm as ambient basemently
Sketch:	1	•	
		5 5	

401 E. Adington ST N->	Not also established a company of the company of th	in Manufacturity Corporation e 4-26-11/1:30 Comp. By JE/MA	lerraconPage/of} CHECKED BY:
Zo 26' (""	401 E. Arlington ST	N ->	Le
Some standay Hz0 in base ~ 20%	X. L	Scarple Scarple Scarple Stranger	porte 10' 5 x 13' E 2 X NWC



Date of Visit: 4/28/11 Time of Arrival: 13:33 Time of Departure:
Time of Arrival.
Names of Terracon Representatives: Justin Enna!
Rob Bergman
Introduce Terracon Representatives and Show Terracon Identification
Verify identity of resident; confirm authority to allow entry
Explain purpose of visit (check as appropriate):
Sample Port Installation Sub-Slap Vapor Sampling
Completion of Questionnaire Indoor Air Sampling Canister Installation
Indoor Air Sampling Canister Outdoor Air Sampling Removal
Other [Explain:
Explain if follow-up visits will occur and verify date/time of follow-up visits as appropriate.
Date of Follow-Up Visit: 5/2/11
Time of Follow-Up Visit: 1333
Items Completed as Noted:
Gentleel
Terracon Representative Signature
Delitiont Signature
Resident Signature



Sampling Port Installation Checklist

\checkmark	Work with resident to identify mutually agreeable area to install port in lowest occupied level of home.
Precau	ations to be taken to protect floor coverings, if applicable:
	/
	Install sampling port in accordance with work plan procedures.
V	Clean up any debris.
GF .	Invite homeowner to view installed port and explain necessary precautions to prevent disturbance of it while it cures.
Items	Completed as Noted: April Au
	con Representative Signature ent Signature
	2,550



Street Address: 211 Buston Ave
Name of Resident:

Date o	of Visit: 5/2/2011	
Time (of Arrival: 1335 Time of Departure: 1440	-
Names	es of Terracon Representatives: Yes clauces	
	justin enwall	- 140 - 140
4	Introduce Terracon Representatives and Show Terracon Identification	
土	Verify identity of resident; confirm authority to allow entry	
×	Explain purpose of visit (check as appropriate):	
	Sample Port Installation	oling
	Completion of Questionnaire Indoor Air Sampling Installation	; Canister
	Indoor Air Sampling Canister Outdoor Air Sampling Removal	A
	Other [Explain:]	
8	Explain if follow-up visits will occur and verify date/time of follow-up visit appropriate.	its as
	Date of Follow-Up Visit:	
	Time of Follow-Up Visit:	
Items (Completed as Noted:	
	week Williams	
Terrac	con Representative Signature	
Reside	ent Signature	

Residence ID:	lo al	Address:	211 Boston Ave
Sample ID:	SS-10	Location:	Waterlov
Date:	5/2/2011	Time:	1335
Sampler(s):	muline	Summa Canister ID:	Z0101
Flow Controller ID:	184	Flow Controller Rate Setting (cc/min):	
Start Time:	1342	Finish Time:	1424
Pre-Sampling Vacuum (in Hg):	-29.5	Post-Sampling Vacuum (in Hg):	-1,5
Organic Vapor Reading (ppm):	ambient:00 SS:01	PID used:	Muni KATE 3000
Summa Canister went to Ambient?	Yes (No	Method:	TO:15 Grab
	Southwell.	N.	<u> </u>
Sketch:	The support of this and of this	the transfer of	Block wall - don't know whom's in otherside Op= port = dow W=thoheater C=churren F=furrace



Arrival Checklist

Date o	f Visit: 4 rue 2011
Time o	of Arrival: 530 Time of Departure: 405
Names	s of Terracon Representatives: John Bruneger
	Jer Clavery
X	Introduce Terracon Representatives and Show Terracon Identification
X	Verify identity of resident; confirm authority to allow entry
X	Explain purpose of visit (check as appropriate):
	Sample Port Installation Sub-Slap Vapor Sampling
	Completion of Questionnaire Indoor Air Sampling Canister Installation
	Indoor Air Sampling Canister Outdoor Air Sampling Removal
·	Other [Explain:]
X	Explain if follow-up visits will occur and verify date/time of follow-up visits as appropriate.
	Date of Follow-Up Visit: 428
	Time of Follow-Up Visit: 430
Items (Completed as Noted:
Terrac	on Representative Signature
Reside	ent Signature

-5-



Date and Time of Visit: 14/201/530

Sampling Port Installation Checklist

χ	Work with resident to identify mutually agreeable area to install port in lowest occupied level of home.
Precau	utions to be taken to protect floor coverings, if applicable:
×	
3 <u>4</u>	
\overline{X}	Install sampling port in accordance with work plan procedures.
$\overline{\chi}$	Clean up any debris.
*	Invite homeowner to view installed port and explain necessary precautions to prevent disturbance of it while it cures.
Items	Completed as Noted:
	un fullancy con Representative Signature
Ten/ac	con Representative Signature
Resid	ent Signature



Arrival Checklist

Date o	of Visit: 4/28/2011			
Time (of Arrival: 430 Time of Departure: 570			
Name	Names of Terracon Representatives:			
	Jur clancery			
×	Introduce Terracon Representatives and Show Terracon Identification			
\preceq	Verify identity of resident; confirm authority to allow entry			
$\overline{\lambda}$	Explain purpose of visit (check as appropriate):			
	Sample Port Installation Sub-Slap Vapor Sampling			
	Completion of Questionnaire Indoor Air Sampling Canister Installation			
	Indoor Air Sampling Canister Outdoor Air Sampling Removal			
	Other [Explain:]			
7 <u> </u>	Explain if follow-up visits will occur and verify date/time of follow-up visits as appropriate.			
	Date of Follow-Up Visit:			
	Time of Follow-Up Visit:			
Items	Completed as Noted:			
Je	con Representative Signature			

Resident Signature

Residence ID:	13	Address:	216 Boston Ave
Sample ID:	55-13	Location:	Water los
Date:	4/28/2011	Time:	430
Sampler(s):	Hol me	Summa Canister ID:	62342N
Flow Controller ID:		Flow Controller Rate Setting (cc/min):	
Start Time:	1637	Finish Time:	(71S
Pre-Sampling Vacuum (in Hg):	-28.5	Post-Sampling Vacuum (in Hg):	-2,5
Organic Vapor Reading (ppm):		PID used: WWW PATE	ambient: O. Appropri
Summa Canister went to Ambient?	Yes / No	Method: TO-15	Grab
Sketch:	N 1 - 11.3 - 1 - 11.3	24.8	15.4.
	-3	C 4.6 ' +-12	<u>s</u> '



Street Address: 223 Boshon Ave.
Name of Resident:

Date o	f Visit: 4/27/4	
Time (of Arrival: 830 Time	e of Departure: 940
Name	s of Terracon Representatives:	Tasta Ence!
	_/	Mak Anderson
$\underline{\checkmark}$	Introduce Terracon Representatives ar	nd Show Terracon Identification
V	Verify identity of resident; confirm au	thority to allow entry
\checkmark	Explain purpose of visit (check as app	propriate):
	Sample Port Installation	Sub-Slap Vapor Sampling
	Completion of Questionnaire	Indoor Air Sampling Canister Installation
	Indoor Air Sampling Canister Removal	Outdoor Air Sampling
	Other [Explain:	
<u></u>	Explain if follow-up visits will occur appropriate. Date of Follow-Up Visit: 5/2/2	and verify date/time of follow-up visits as
	Time of Follow-Up Visit:	
Items	Completed as Noted:	
Terrac	on Representative Signature	



Street Address: 223 Boslon Ave.

Name of Resident:

Date and Time of Visit: 4-27-11 c 8:30

Sampling Port Installation Checklist	
Work with resident to identify mutually agreeable area to install port in lowest occupied level of home.	
Precautions to be taken to protect floor coverings, if applicable:	
only small strip @ a 8'S x 3-6' E 2 NWC Wes printed concrete fly	-
-> other appears to be 12 x12" for tills	
L limited access to entire bosement	
✓ Install sampling port in accordance with work plan procedures.	
Clean up any debris.	
Invite homeowner to view installed port and explain necessary precautions to prevent disturbance of it while it cures.	
Items Completed as Noted:	
Coret all	
Terracon Representative Signature	
Resident Signature	



Street Address: 223 Boston tve.
Name of Resident:

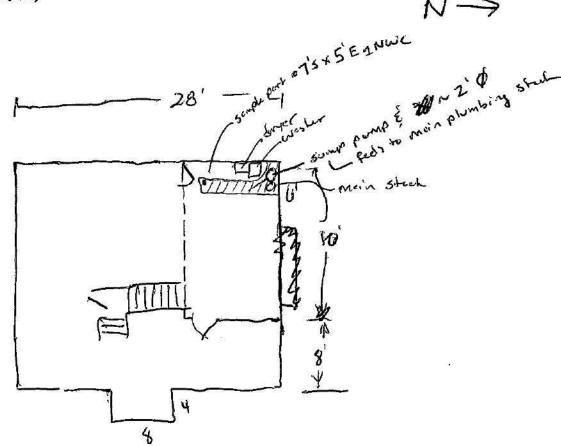
Date of Visit: 5/2/2011
Time of Arrival: 1100 Time of Departure: 1155
Names of Terracon Representatives: ynclavary
Introduce Terracon Representatives and Show Terracon Identification
Verify identity of resident; confirm authority to allow entry
Explain purpose of visit (check as appropriate):
Sample Port Installation Sub-Slap Vapor Sampling
Completion of Questionnaire Indoor Air Sampling Canister Installation
Indoor Air Sampling Canister Outdoor Air Sampling Removal
Other [Explain:
Explain if follow-up visits will occur and verify date/time of follow-up visits as appropriate.
Date of Follow-Up Visit:
Time of Follow-Up Visit: tems Completed as Noted: Will We will the state of Follow-Up Visit:
tems Completed as Noted:
Jeun Mancey
Resident Signature

Flow Controller ID: 97 Flow Controller Rate Setting (cc/min): Start Time:	Date: 5/2/7071 Time: 1/00 Sampler(s): fmc fme Summa Canister ID: 668D Flow Controller ID: q Flow Controller Rate Setting (cc/min): Start Time: 1111 Finish Time: 1/50 Pre-Sampling Vacuum (in Hg): -2.5 Organic Vapor Reading (ppm): 65'. 0.0 ppm PID used: 1/50 Summa Canister went to Ambient? Yes / No Method: 70-15 Grab Sketch:	Residence ID:	15	Address:	223 Boston Ave
Sampler(s): Molyme Summa Canister ID: Log 8D	Sampler(s): Jmc Jme Summa Canister ID: We8D	Sample ID:	5515	Location:	WaterloD
Flow Controller ID: 97 Flow Controller Rate Setting (cc/min): Start Time:	Flow Controller ID: 9 Flow Controller Rate Setting (cc/min): Start Time:	Date:	5/2/7011	Time:	1100
Flow Controller ID: 97 Flow Controller Rate Setting (cc/min): Start Time:	Flow Controller ID: 97 Flow Controller Rate Setting (cc/min): Start Time:	Sampler(s):	mo Ime	Summa Canister ID:	668D
Pre-Sampling Vacuum (In Hg): -29 Post-Sampling Vacuum (In Hg): -2,5 Organic Vapor Reading (ppm): Summa Canister went to Ambient? Comments: Sketch:	Pre-Sampling Vacuum (in Hg): -29 Organic Vapor Reading (ppm): Summa Canister went to Ambient? Comments: Sketch:	Flow Controller ID:	3 3	1) DENT AT DESCRIPTION OF A PARTY	
Pre-sampling Vacuum (in Hg): -29 Organic Vapor Reading (ppm): Summa Canister went to Ambient? Comments: Sketch:	Pre-Sampling Vacuum (in Hg): -29 Organic Vapor Reading (ppm): Summa Canister went to Ambient? Comments: Sketch:	Start Time:	IIII	Finish Time:	1150
Reading (ppm): Summa Canister went to Ambient? Comments: Sketch:	Reading (ppm): S'. 0.0 ppm Summa Canister went to Ambient? Comments: Sketch:		-29		-2.5
went to Ambient? Comments: Sketch:	went to Ambient? Yes / (No) Method: TO-15 Grab Sketch:		ss'. 0.0ppm	PID used: 10 6	Muni PAT 3000
Sketch:	Sketch:			Method:	TV-15 Grab
	***	Comments:			
		Sketch:		3	3

Jerracon

	(A)		
PROJECT:		Page of	
JÓB NO.	Date 4-27-11	Comp. By JE/MA CHECKED BY: 18	

223 E. Boston Ave,



Bigeneral Mostly Friebled, client didn't invite us into other base rms.

L) client works 3rd shift & is leying down

ETTTE = printed concrete, other appears to be 12 x12 C/r tibs



Street Address: Name of Resident:

227	Buston Ave	
		Ĭ

Date o	f Visit: 4/25/2011	
Time o	of Arrival: \\00 \\ Time of D	eparture: W4S
Names	of Terracon Representatives: John	Bringer
. T	tu	Vancy
\not	Introduce Terracon Representatives and She	ow Terracon Identification
\overrightarrow{A}	Verify identity of resident; confirm authorit	ty to allow entry
X	Explain purpose of visit (check as appropri	ate):
	X Sample Port Installation	Sub-Slap Vapor Sampling
	Completion of Questionnaire	Indoor Air Sampling Canister Installation
	Indoor Air Sampling Canister Removal	Outdoor Air Sampling
	Other [Explain:	
<u>X</u>	Explain if follow-up visits will occur and v appropriate.	erify date/time of follow-up visits as
	Date of Follow-Up Visit: 4/28/201	——————————————————————————————————————
	Time of Follow-Up Visit: \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	
Items 6	Completed as Noted:	
Du	unto Millernay	
Terrac	on Representative Signature	
Reside	ent Signature	



Street Address: 227 Boston A.c. Name of Resident:

Date and Time of Visit: 4/25/2011 31100 am

Sampling Port Installation Checklist

X	Work with resident to identify mutually agreeable area to install port in lowest occupied level of home.
Precau	ations to be taken to protect floor coverings, if applicable:
· ·	
Marks.	
\times	Install sampling port in accordance with work plan procedures.
\angle	Clean up any debris.
\preceq	Invite homeowner to view installed port and explain necessary precautions to prevent disturbance of it while it cures.
Items	Completed as Noted:
Terrac	con Representative Signature
reside	ent Signature

CHI- 1798719v1 -6-



Date of	e of Visit: 4/28/201	
Time o	e of Arrival: Time of Departure:	220
Names	nes of Terracon Representatives:	***
X	Introduce Terracon Representatives and Show Terracon Idea	ntification
X	Verify identity of resident; confirm authority to allow entry	
1	Explain purpose of visit (check as appropriate):	
	Sample Port Installation Sub-SI	ap Vapor Sampling
		r Air Sampling Canister lation
	Indoor Air Sampling Canister Outdoo Removal	r Air Sampling
	Other [Explain:]	
5 <u></u>	Explain if follow-up visits will occur and verify date/time or appropriate.	f follow-up visits as
	Date of Follow-Up Visit:	
	Time of Follow-Up Visit:	
Items (ns Completed as Noted:	
Terrace	and Mulmout racon Representative Signature	
1 Testuc	ident Signature	

3	<u></u>		
Residence ID:	17	Address:	227 Boston
Sample ID:	55-17	Location:	Waterlow
Date:	4/28/2011	Time:	1/00
Sampler(s):	Holmc	Summa Canister ID:	l ku31
Flow Controller ID:	0	Flow Controller Rate Setting (cc/min):	
Start Time:	IIIS	Finish Time:	1145
Pre-Sampling Vacuum (in Hg):	-28,5	Post-Sampling Vacuum (in Hg):	-4
Organic Vapor Reading (ppm):	19.0000	PID used:	
Summa Canister went to Ambient?	Yes / No	Method: TU-15	Grab
Sketch: F: fur vace W: the Offeater C= Chumney	N 20.5' =-	22.5 - 10.2	floor @ aroun op-prot
		8)	gas Car involument mustly drained but awall and of say vernaining

Sampler(s): Summa Canister ID: 1534 Flow Controller ID: Flow Controller Rate Setting (cc/min): Start Time: 1/44 Finish Time: 1/214 Pre-Sampling Vacuum (in Hg): -3 Organic Vapor Reading (ppm): PID used: 3000 1.2 ppm Summa Canister Went to Ambient? Yes / No Method: Grab	Residence ID:	17	Address:	227 Boston
Date: 4/28/201 Time: 1100 Sampler(s): Summa Canister ID: 1534 Flow Controller Rate Setting (cc/min): Start Time: 1/44 Finish Time: 1214 Pre-Sampling Vacuum (in Hg): -3 Organic Vapor Reading (ppm): PID used: 3000 1.2 ppm 1.2 ppm 1.2 ppm 1.2 ppm West I No Method: Grab Sketch:	Sample ID:	SSD-17	Location:	Waterloo
Flow Controller ID: Start Time:	Date:	4/28/2011	Time:	
Setting (cc/min): Start Time: 144	Sampler(s):		Summa Canister ID:	1534
Pre-Sampling Vacuum (in Hg): Organic Vapor Reading (ppm): Summa Canister went to Ambient? Prost-Sampling Vacuum (in Hg): -3 Whi kht ambient: 1.2 ppm 1.2 ppm Wethod: Grab Grab Sketch:	Flow Controller ID:			
Vacuum (in Hg): -28 Vacuum (in Hg): Organic Vapor Reading (ppm): Summa Canister went to Ambient? Yes / No Method: Grab Sketch:	Start Time:	1144	Finish Time:	1214
Summa Canister went to Ambient? Yes / No Method: Grab Comments: imbient . 1.2 ppm Sketch:		- 28		Orchad
Summa Canister went to Ambient? Comments: Wes / No Method: Grab Sketch:				1.2 ppm
Sketch:		Yes / No	Method:	-100
Sketch: Sch SS-17	70	our was strategy and strategy		
		u SS-17		
			•	
•				



Date of	Visit: 4/27/2011
Time of	f Arrival: 1030 Time of Departure: 1115
Names	of Terracon Representatives: John Bruneyw
	Ser Clancy
<u>*</u> 1	Introduce Terracon Representatives and Show Terracon Identification
大,	Verify identity of resident; confirm authority to allow entry
<u>, (</u>	Explain purpose of visit (check as appropriate):
	✓ Sample Port Installation
=	Completion of Questionnaire Indoor Air Sampling Canister Installation
ā	Indoor Air Sampling Canister Outdoor Air Sampling Removal
2	Other [Explain:]
(V2) N 7/1/	Explain if follow-up visits will occur and verify date/time of follow-up visits as appropriate.
1	Date of Follow-Up Visit: 4/29
20 20 7	Time of Follow-Up Visit: 100
Items C	completed as Noted:
Jens	igh Mlancey
Terraco	n Representative Signature
Nesilie	II STRIMINE

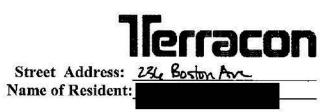


Street Address: 2310 Boshoo Name of Resident:

Date and Time of Visit: 4 27/201

Sampling Port Installation Checklist

1	Work with resident to identify mutually agreeable area to install port in lowest occupied level of home.
Precau	utions to be taken to protect floor coverings, if applicable:
- 10 OZ	
S.	
50	
K	Install sampling port in accordance with work plan procedures.
√	Clean up any debris.
<u>x</u>	Invite homeowner to view installed port and explain necessary precautions to prevent disturbance of it while it cures.
Items	Completed as Noted:
Terrac	con Representative Signature
Kesiu	ent Signature



Date o	f Visit: 4/29/201
	of Arrival: NOU Time of Departure: NSS
Names	of Terracon Representatives: Jen clauce
	Justin anwall
X	Introduce Terracon Representatives and Show Terracon Identification
又	Verify identity of resident; confirm authority to allow entry
X	Explain purpose of visit (check as appropriate):
	Sample Port Installation Sub-Slap Vapor Sampling
	Completion of Questionnaire Indoor Air Sampling Canister Installation
	Indoor Air Sampling Canister Outdoor Air Sampling Removal
	Other [Explain:
, 22-2 []	Explain if follow-up visits will occur and verify date/time of follow-up visits as appropriate.
	Date of Follow-Up Visit:
	Time of Follow-Up Visit:
Items (Completed as Noted:
Du	under Al Clangus
Terrac	on Representative Signature

Residence ID:	20	Address:	236 Boston Ave
Sample ID:	55.20	Location:	236 Boston Ave Waterloo
Date:	4/29/2011	Time:	1100
Sampler(s):	zme ligne	Summa Canister ID:	12820
Flow Controller ID:	198	Flow Controller Rate Setting (cc/min):	30.00
Start Time:	lliv	Finish Time:	USD
Pre-Sampling Vacuum (in Hg):	-28.5	Post-Sampling Vacuum (in Hg):	-2.5
Organic Vapor Reading (ppm):	ambient : 0.leppm SS:05ppm	PID used:	Kuni VAE 3000
Summa Canister went to Ambient?	Yes / (No)	Method:	Grab
Sketch:	N T	- 9' - 0	@ : dvanin Op : port C : chumnuy F : fourace
		13	barner chota wall) assume the heater is behind the barn but can't see or get to it.



Street Address: 239 Boston Ave. Name of Resident:

Arrival	Ch	ieck	list

4/27/11

Date of Visit:
Time of Arrival: 1330 Time of Departure: 1430
Names of Terracon Representatives: Justin Ennall
Mark Anderson
Introduce Terracon Representatives and Show Terracon Identification
Verify identity of resident; confirm authority to allow entry
Explain purpose of visit (check as appropriate):
Sample Port Installation Sub-Slap Vapor Sampling
Completion of Questionnaire Indoor Air Sampling Canister Installation
Indoor Air Sampling Canister Outdoor Air Sampling Removal
Other [Explain:]
Explain if follow-up visits will occur and verify date/time of follow-up visits as appropriate.
Date of Follow-Up Visit: 4/29/11
Date of Follow-Up Visit: 4/29/11 Time of Follow-Up Visit: 300 PM
Items Completed as Noted:
Jon to Cell
Terracon Representative Signature
Resident Signature



Name of Resident:

Date and Time of Visit: 4-27-11 @ 1230-p

Sampling Port Installation Checklist

Work with resident to identify mutually agreeable area to install port in lowest occupied level of home.
Precautions to be taken to protect floor coverings, if applicable:
Install sampling port in accordance with work plan procedures.
Clean up any debris.
Invite homeowner to view installed port and explain necessary precautions to prevent disturbance of it while it cures. Did not want to see 14
Items Completed as Noted:
Terraco Representative Signature
Resident Signature



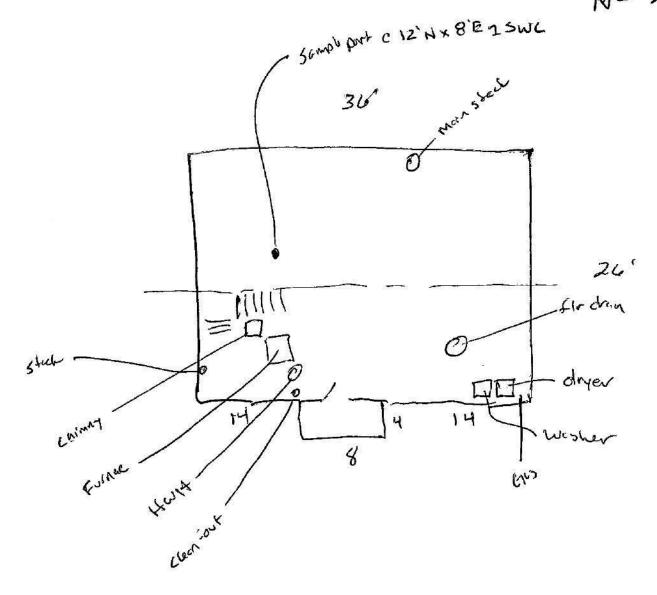
Date of Visit: 42012011
Time of Arrival: 1540 Time of Departure: 1435
Names of Terracon Representatives: XII Claneur
justin enwall
Introduce Terracon Representatives and Show Terracon Identification
Verify identity of resident; confirm authority to allow entry
Explain purpose of visit (check as appropriate):
Sample Port Installation Sub-Slap Vapor Sampling
Completion of Questionnaire Indoor Air Sampling Canister Installation
Indoor Air Sampling Canister Outdoor Air Sampling Removal
Other [Explain:]
Explain if follow-up visits will occur and verify date/time of follow-up visits as appropriate.
Date of Follow-Up Visit:
Time of Follow-Up Visit:
Items Completed as Noted:
Terracon Representative Signature
Texticon Representative Signature

Residence ID:	21	Address:	2391 Boston Ave
Sample ID:	SS-21	Location:	Waterloo
Date:	4/29/2011	Time:	1540
Sampler(s):	7mc/fme	Summa Canister ID:	11144
Flow Controller ID:	55	Flow Controller Rate Setting (cc/min):	
Start Time:	1554	Finish Time:	1430
Pre-Sampling Vacuum (in Hg):	-29	Post-Sampling Vacuum (in Hg):	-3
Organic Vapor Reading (ppm):	ambient: 0.3 ppm SS: 0.1 ppm	PID used:	mini RAE 3000
Summa Canister went to Ambient?	Yes / No	Method:	7015 Grab
Sketch:			
		,	

200				
3	0	ſē		

239 Boston Ave

N->



wisher drin = PVC above grade to fir dran

Street Address: 240 Boston Ave Name of Resident:

Date o	of Visit: 4/24/2011			
Time (of Arrival: 3 ³⁰ Time of Departure:			
Names of Terracon Representatives: John Brunger				
	Fr. Claneur			
\times	Introduce Terracon Representatives and Show Terracon Identification			
$\overline{4}$	Verify identity of resident; confirm authority to allow entry			
7	Explain purpose of visit (check as appropriate):			
	Sample Port Installation Sub-Slap Vapor Sampling			
	Completion of Questionnaire Indoor Air Sampling Canister Installation			
	Indoor Air Sampling Canister Outdoor Air Sampling Removal			
	Other [Explain:			
$\frac{}{}$	Explain if follow-up visits will occur and verify date/time of follow-up visits as appropriate.			
	Date of Follow-Up Visit: 4/28			
	Time of Follow-Up Visit: 250			
Items	Completed as Noted:			
	unt Il Clancers			
Terrac	on Representative Signature			



Street Address: 240 boston tve
Name of Resident:
Date and Time of View

Sampling Port Installation Checklist

\times	Work with resident to identify mutually agreeable area to install port in lowest occupied level of home.					
Precau	Precautions to be taken to protect floor coverings, if applicable:					
56						
S -40 (-						
*	Install sampling port in accordance with work plan procedures.					
大	Clean up any debris.					
X	Invite homeowner to view installed port and explain necessary precautions to prevent disturbance of it while it cures.					

Items Completed as Noted:

(Manual Manual Terracon Representative Signature)



Name of Resident:

Arrival Checklist

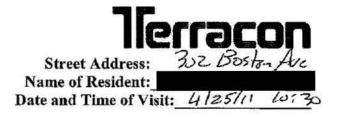
Date of	f Visit: _	4/28/201	- Designations			
			Time of I		5. 30 Marie 2000	
Names of Terracon Representatives:						
			len o	lancer		
<u> </u>	Introduce	Terracon Repre		1.1	con Identification	
· <u> </u>	Verify ide	ntity of resident	; confirm authori	ty to allo	w entry	
\times	Explain p	urpose of visit (check as appropri	ate):		
	San	iple Port Installa	ation		Sub-Slap Vapor Sampling	
	Con	npletion of Que	stionnaire		Indoor Air Sampling Canister Installation	
		oor Air Samplir moval	ng Canister		Outdoor Air Sampling	
	Otl	ner [Explain:		20 5 0		
 (Explain if appropriat		s will occur and v	erify date	time of follow-up visits as	
	Date of Fo	ollow-Up Visit:	75 (ISO			
	Time of F	ollow-Up Visit:		<u> </u>		
Items (Completed	as Noted:				
Terrace	UNANON Réprese	A Clancus Intative Signatur	re			
	V		eren.			
Reside	nt Signatuı	re	্য			

CHI- 1798719v1

Residence ID:	22	Address:	240 Boston Ave
Sample ID:	SS-22	Location:	waterloo
Date:	4/28/2011	Time:	300
Sampler(s):	Ato / Smc	Summa Canister ID:	6578
Flow Controller ID:		Flow Controller Rate Setting (cc/min):	
Start Time:	11508	Finish Time:	1550
Pre-Sampling Vacuum (in Hg):	-30	Post-Sampling Vacuum (in Hg):	-3.8
Organic Vapor Reading (ppm):		PID used: 3000	substat: 1.4 ppm
Summa Canister went to Amblent?	Yes / No	Method: 10.15	Grab
Sketch: N	22,0	5'	Fuordiani (5)
Sketch: N a	22,	5' ===-	fuordrain (3)
Sketch: N		1	port op
1		@	port op
1			port op
		Ø of A.	port op
		=	port op
	782	=	port op
	782	=	port op



Date of Visit: 4-25-11
Time of Arrival: 10:30 Time of Departure: 12:00
Names of Terracon Representatives: Justin Ennall Mark Anderson
Mark Anderson
Introduce Terracon Representatives and Show Terracon Identification
Verify identity of resident; confirm authority to allow entry
Explain purpose of visit (check as appropriate):
Sample Port Installation Sub-Slap Vapor Sampling
Completion of Questionnaire Indoor Air Sampling Canister Installation
Indoor Air Sampling Canister Outdoor Air Sampling Removal
Other [Explain:]
Explain if follow-up visits will occur and verify date/time of follow-up visits as appropriate.
Date of Follow-Up Visit: 4/28/11
Time of Follow-Up Visit:
Items Completed as Noted:
Gust Geel
Terracon Representative Signature
Resident Signature



Sampling Port Installation Checklist

Work with resident to identify mutually agreeable area to install port in lowest occupied level of home.					
Precautions to be taken to protect floor coverings, if applicable:					
Drilled the SSMP borchole through concrete covered					
alea					
Install sampling port in accordance with work plan procedures.					
Clean up any debris.					
Invite homeowner to view installed port and explain necessary precautions to prevent disturbance of it while it cures.					
Items Completed as Noted:					
Just and					
Terracon Representative Signature					
Res					



Arrival Checklist

Date of Visit: 410 Time of Departure: 1000
Time of Arrivax.
Names of Terracon Representatives: Justin Enwall
Names of Terracon Representatives: Toughin Enwall Rob Beigman
Introduce Terracon Representatives and Show Terracon Identification
Verify identity of resident; confirm authority to allow entry
Explain purpose of visit (check as appropriate):
Sample Port Installation Sub-Slap Vapor Sampling
Completion of Questionnaire Indoor Air Sampling Canister Installation
Indoor Air Sampling Canister Outdoor Air Sampling Removal
Other [Explain:]
Explain if follow-up visits will occur and verify date/time of follow-up visits as appropriate.
Date of Follow-Up Visit:
Time of Follow-Up Visit:
Items Completed as Noted:
Just leell
Terracon Representative Signature
Resident Signature

-5-

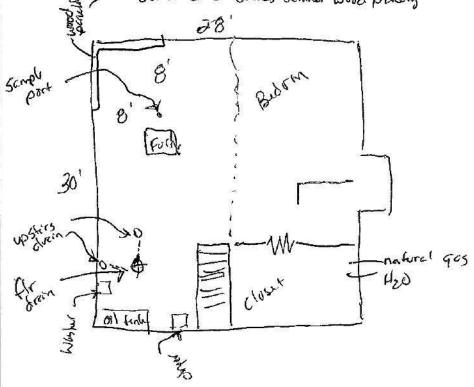
Residence ID:	28	Address:	302 Boston	
Sample ID:	55-28	Location:	Water Lo, IA	
Date:	4/28/11	Time:	910	
Sampler(s):	JME/ BPB	Summa Canister ID:	1519	
Flow Controller ID:	1-79	Flow Controller Rate Setting (cc/min):	200 cc/min	
Start Time:	915	Finish Time:	957	
Pre-Sampling Vacuum (in Hg):	25.5 in Hg	Post-Sampling Vacuum (in Hg):	1.5 in Mg	
Organic Vapor Reading (ppm):	1.5	PID used:	WBL misilar 3000 #12 with 10.6 cV km	
Summa Canister went to Ambient?	Yes (No	Method:	Grab	
Comments:	Punal Zooce	from JEMP an	d a lock from	
	Puyal Zcocc Flow contaller pris	or to sampling		
See detailed sketch				
		•		

Jerracon

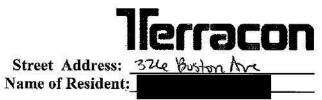
PROJECT: Chamberlain Manifadring Corporation - 302 Boston Ave Page 1 of 1

JOB NO. 07107020 Date 4-25-11 Comp. By JME / MA CHECKED BY:

302 Boston Ave, W'100 / Story & 1/2 (cape cod)



N 1



Arrival Checklist

Date o	f Visit: 4/25/2611			
Time o	of Arrival: 430 Time of Departure: ~500			
Names of Terracon Representatives: John Briweger				
	For Clancer			
\times	Introduce Terracon Representatives and Show Terracon Identification			
<u> </u>	Verify identity of resident; confirm authority to allow entry			
$\overline{\chi}$	Explain purpose of visit (check as appropriate):			
	Sample Port Installation Sub-Slap Vapor Sampling			
	Completion of Questionnaire Indoor Air Sampling Canister Installation			
	Indoor Air Sampling Canister Outdoor Air Sampling Removal			
	Other [Explain:]			
4	Explain if follow-up visits will occur and verify date/time of follow-up visits as appropriate.			
	Date of Follow-Up Visit: 4/28 & 4/29			
	Time of Follow-Up Visit: 8:00 am_			
Items (Completed as Noted:			
Terrac	on Representative Signature			
Reside	ent Signature			

-5-



Name of Resident:

Street Address: 3740 Poston A

Date and Time of Visit: 4/25/2011

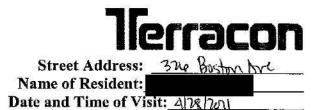
Sampling Port Installation Checklist

Work with resident to identify mutually agreeable area to install port in lowest occupied level of home.
Precautions to be taken to protect floor coverings, if applicable:
Install sampling port in accordance with work plan procedures.
Clean up any debris.
Invite homeowner to view installed port and explain necessary precautions to prevent disturbance of it while it cures.
Items Completed as Noted:
Terracon/Representative Signature
/Terracon/Representative Signature
Resident Signature



Street Address: 3216 Breton by.
Name of Resident:

Date o	of Visit: 4/28/2011	
Time o	of Arrival: Time of De	parture: <u>§75</u>
Names	s of Terracon Representatives: John B	mayer
7	Introduce Terracon Representatives and Short	w Terracon Identification
1	Verify identity of resident; confirm authority	to allow entry
\times	Explain purpose of visit (check as appropriat	e):
	Sample Port Installation	Sub-Slap Vapor Sampling
	Completion of Questionnaire	Indoor Air Sampling Canister Installation
	Indoor Air Sampling Canister Removal	Outdoor Air Sampling
	Other [Explain:	
X	Explain if follow-up visits will occur and verappropriate.	rify date/time of follow-up visits as
	Date of Follow-Up Visit: 4/29/201	_
	Time of Follow-Up Visit:	-
Items (Completed as Noted:	
Du .	and Milamers	
	ent Signature	
Keside	ent atanguature	



Indoor Air Sampling Canister Installation Checklist

<u>X</u>	Verify that heating/cooling system has been operating for at least 24 hours and that doors and windows have only been opened incidentally.
X	Work with homeowner to identify an unobtrusive spot for canister to be placed consistent with work plan requirements.
_ _	Explain precautions to be taken while the canister collects the samples.
\mathcal{X}_{-}	Arrange for visit to remove canister:
	Date: 4/20/201
	Time:
Items (Completed as Noted:
	and Melanery
Terrac	on Representative Signature

CHI- 1798719v1 -7-

Resident Signature

Residence ID:	33	Address:	326 Bo	iton Are	
Sample ID:	1A-33-B	Location:	Worter Le	120	
Date:	Alre Jun	Time:	810	10 2 0 400000	
Sampler(s):	Hr Ime	Summa Canister ID:	12543		
Flow Controller ID:	K431	Flow Controller Rate Setting (cc/min):	24hr		
Start Time:	810 4/28	Finish Time:	804	4/29	
Pre-Sampling Vacuum (in Hg):	-29.0	Post-Sampling Vacuum (in Hg):	-1.5		
Organic Vapor Reading (ppm):		PID used:		-(c	
Summa Canister went to Ambient?	Yes / No	Method: 7015		Grab	
sketch: under basement strick, on top shelf Strick					
1 = dvavi W=1420					
C: chumuy F: furrace					
	1-121-1 Jacober				

DO NOT TOUCH

SAMPLE IN PROGRESS

TERRACON PROJECT NUMBER: 15-710-70 20
PROJECT LOCATION: 324 Boston Ave (#33)
DATE INSTALLED: 4/201
TIME INSTALLED: 810
ADDRESS INSTALLED: Sime
SAMPLE ID: 1A-33-13
SAMPLE LOCATION: Basement - understring on Shalf
1 2 Vs 22
DEVICE #: \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\
LAB ID #:
RETRIEVAL DATE: 4/24
PLANNED RETRIEVAL TIME: 810
ACTUAL RETRIEVAL TIME: 304
TERRACON REPRESENTATIVE: MM 1 100
0. 101.
COMMENTS:



FOR INFORMATION CALL 563-355-0702 870 40th Avenue

Bettendorf, Iowa 52722

Residence ID:	33	Address:	324 Boston Are	
Sample ID:	1A-33-1	Location:	Wasterloo	
Date:	4/28/2011	Time:		
Sampler(s):	xt6/tmc	Summa Canister ID:	0112	
Flow Controller ID:	K392	Flow Controller Rate Setting (cc/min):		
Start Time:	820	Finish Time:	813	
Pre-Sampling Vacuum (in Hg):	-29	Post-Sampling Vacuum (in Hg):	-2.5	
Organic Vapor Reading (ppm):		PID used:		
Summa Canister went to Ambient?	Yes / No	Method: 18.15	Grab	
Comments:				
Sketch:				
In living voon	(while of home), on die	x along E wall		

DO NOT TOUCH

SAMPLE IN PROGRESS

TERRACON PROJECT	NUN	IBER:	O.tw.	JUNO.
PROJECT LOCATION:	324	Baston	Ad	1433

PROJECT LOCATION: 324 Baston Ave. (#

DATE INSTALLED: 478 201

TIME INSTALLED: \\ \frac{1}{2} \frac{1}{2} \cdot \]

ADDRESS INSTALLED: Same

SAMPLE ID: 1A-33-1

SAMPLE LOCATION: Lyry your on disk

DEVICE #: 0/12 CONTROLLER#: k392

LAB ID #:

RETRIEVAL DATE: 4/201

PLANNED RETRIEVAL TIME: 818

ACTUAL RETRIEVAL TIME: 83

TERRACON REPRESENTATIVE: XWE 100

COMMENTS:



FOR INFORMATION CALL 563-355-0702

870 40th Avenue Bettendorf, Iowa 52722



Street Address: 374 Boston Ave 3

Date of	f Visit: 4/29/2011
Time o	of Arrival: Time of Departure:
Names	of Terracon Representatives: xen dency
	Justin envall
工	Introduce Terracon Representatives and Show Terracon Identification
$\overline{+}$	Verify identity of resident; confirm authority to allow entry
\times	Explain purpose of visit (check as appropriate):
	Sample Port Installation Sub-Slap Vapor Sampling
	Completion of Questionnaire Indoor Air Sampling Canister Installation
	Indoor Air Sampling Canister Outdoor Air Sampling Removal 42
	Other [Explain:]
-	Explain if follow-up visits will occur and verify date/time of follow-up visits as appropriate.
	Date of Follow-Up Visit:
	Time of Follow-Up Visit:
Items (Completed as Noted:
Jen	unh M Clancy
Terrac	on Representative Signature
Reside	ent Signature

Residence ID:	33	Address:	32Le Boston Ave
Sample ID:	SS-33	Location:	Waterloo
Date:	4/29/2011	Time:	San
Sampler(s):	me) me	Summa Canister ID:	12345
Flow Controller ID:		Flow Controller Rate Setting (cc/min):	
Start Time:	018	Finish Time:	850
Pre-Sampling Vacuum (in Hg):	-29	Post-Sampling Vacuum (in Hg):	-2.5
Organic Vapor Reading (ppm):	Ambient: 0.3 ppm SS: 0.1 ppm	PID used:	Mun fae 3000
Summa Canister went to Ambient?	Yes / No	Method: 70-15	Grab
Sketch:		*	0 37



Street Address: 222 E. 4th St.
Name of Resident:

Date of Visit: _4 24 201				
		Departure:		
Name	s of Terracon Representatives:	Brimeyer		
	to	Claucy		
\times	Introduce Terracon Representatives and S	nos portes de societa sur poutre se		
$\overline{\chi}$	Verify identity of resident; confirm autho	rity to allow entry		
\preceq	Explain purpose of visit (check as approp	riate):		
	★ Sample Port Installation	Sub-Slap Vapor Sampling		
	Completion of Questionnaire	Indoor Air Sampling Canister Installation		
	Indoor Air Sampling Canister Removal	Outdoor Air Sampling		
	Other [Explain:			
X_{-}	Explain if follow-up visits will occur and appropriate.	verify date/time of follow-up visits as		
	Date of Follow-Up Visit: 429/2011	 :		
	Time of Follow-Up Visit: _\0am			
Items	Completed as Noted:			
Terracon Representative Signature				
	1 3-1	in the second se		



Street Address: 2221 EATH ST

Name of Resident:

Date and Time of Visit: 4/24/2011

Sampling Port Installation Checklist

\times	Work with resident to identify mutually agreeable area to install port in lowest occupied level of home.
Precau	ations to be taken to protect floor coverings, if applicable:
8	
P	
	Install sampling port in accordance with work plan procedures.
$\stackrel{\times}{\rightarrow}$	Clean up any debris.
\times	Invite homeowner to view installed port and explain necessary precautions to prevent disturbance of it while it cures.
Items	Completed as Noted:
Terrac	con Representative Signature
ī	



Arrival Checklist

Date of	Visit: _4	29/2011	=5		
Time of	f Arrival: _	1000	Time of D	eparture	: 1055
Names	of Terracor	n Representatives	: yen da	very	A 20
			Justin	enwal	Q
<u> </u>	Introduce Te	erracon Represent	atives and Sho	ow Terrac	on Identification
4	Verify ident	ity of resident; con	nfirm authorit	y to allow	entry
<u> </u>	Explain purj	oose of visit (chec	k as appropria	ıte):	
	Sampl	le Port Installation	ı	$\overline{\chi}$	Sub-Slap Vapor Sampling
Sia.	Comp	letion of Question	naire	V2	Indoor Air Sampling Canister Installation
is a	Indoc Remo	or Air Sampling C oval	anister		Outdoor Air Sampling
1 0-	Other	Explain:	\$ 3866		
	Explain if fo appropriate.		l occur and ve	erify date	time of follow-up visits as
Į	Date of Foll	ow-Up Visit:		(A)	
er,	Time of Fol	low-Up Visit:	N.·	= €6	
Items Co	ompleted as	Noted:			
Ju	unfer M	Clancy			
Terraco	n Represent	ative Signature	**		
Residen	t Signature				

CHI- 1798719v1 -5-

Residence ID:	37	Address:	2221 E 4th St	
Sample ID:	SS-37	Location:	Waterloo	
Date:	4/29/204	Time:	1000	
Sampler(s):	me/jme	Summa Canister ID:	04750	
Flow Controller ID:	150	Flow Controller Rate Setting (cc/min):		
Start Time:	101/0	Finish Time:	1050	
Pre-Sampling Vacuum (In Hg):	-29	Post-Sampling Vacuum (in Hg):	-2.5	
Organic Vapor Reading (ppm):	ambient: 0.1 ppm 55: 0.1 ppm	PID used:	Munic PAGE 3000	
Summa Canister went to Ambient?	Yes / No	Method: To 15	Grab	
Sketch: De-port & drain				
24' — 35'				



Date o	f Visit: 4-26-11	1.65	
Time o	of Arrival: 1530	ime of Departure:	
Names	s of Terracon Representatives: _	Justin Enwall	
1	-	Mark Anderson	
1,	Introduce Terracon Representative	s and Show Terracon Identification	
$\sqrt{}$	Verify identity of resident; confirm authority to allow entry		
<u>/</u>	Explain purpose of visit (check as	appropriate):	
	Sample Port Installation	Sub-Slap Vapor Sampling	
	✓ Completion of Questionnair	Indoor Air Sampling Canister Installation	
	Indoor Air Sampling Canis Removal	er Outdoor Air Sampling	
	Other [Explain:		
√	nanamaniata.	our and verify date/time of follow-up visits as	
	Date of Follow-Up Visit: 4/2.	9/11 9129/11 	
	Time of Follow-Up Visit:	\$ 1300	
Items (Completed as Noted:		
Terrac	on Representative Signature		
Res			



Street Address: 2227 € 445 57
Name of Resident:

Date and Time of Visit: 4-26-11 c

Sampling Port Installation Checklist

Work with resident to identify mutually agreeable area to install port in lowest occupied level of home.
Precautions to be taken to protect floor coverings, if applicable: Some paint on floor
Install sampling port in accordance with work plan procedures.
Clean up any debris.
Invite homeowner to view installed port and explain necessary precautions to prevent disturbance of it while it cures.
M .
Items Completed as Noted:
Terracon Representative Signature
Terracon Representative Signature
Resident Signature



Date of Visit: 4/28/11
Time of Arrival: 1306 Time of Departure: 1330
Names of Terracon Representatives: Justin Enerall
Names of Terracon Representatives: Justin Enual! Rob Bargman
Introduce Terracon Representatives and Show Terracon Identification
Verify identity of resident; confirm authority to allow entry
Explain purpose of visit (check as appropriate):
Sample Port Installation Sub-Slap Vapor Sampling
Completion of Questionnaire Indoor Air Sampling Canister Installation
Indoor Air Sampling Canister Outdoor Air Sampling Removal
Other [Explain:]
Explain if follow-up visits will occur and verify date/time of follow-up visits as appropriate.
Date of Follow-Up Visit: 4/79/11
Time of Follow-Up Visit: 1300
Items Completed as Noted:
Gent acl
Terracon Representative Signature
Resident Signature



Indoor Air Sampling Canister Installation Checklist

<u>V</u>	Verify that heating/cooling system has been operating for at least 24 hours and and windows have only been opened incidentally.	d that doors
V	Work with homeowner to identify an unobtrusive spot for canister to be place with work plan requirements.	d consistent
	Explain precautions to be taken while the canister collects the samples.	
<u> </u>	Arrange for visit to remove canister: Date: 4/29/11 Time: 3:00	
	Time:	
Items (Completed as Noted:	
(h	met all	©.
Terrac	on Representative Signature	
Reside	me premiere	

Residence ID:	38	Address:	2227 E 4KS+
Sample ID:	IA-38-B	Location:	Waterla, IA
Date:	4/28/11 1 4/29/11	Time:	1305
Sampler(s):	JME/RPB.	Summa Canister ID:	1407
Flow Controller ID:	1137	Flow Controller Rate Setting (cc/min):	ZUhour
Start Time:	1319 4/28/4	Finish Time:	1605 4129/11
Pre-Sampling Vacuum (in Hg):	- 28.5	Post-Sampling Vacuum (in Hg):	- 15-4
Organic Vapor Reading (ppm):	_	PID used:	
Summa Canister went to Ambient?	Yes / No	Method:	Grab
Comments:	pat in NE corner	t basement	st and sw winus,
Sketch:			2.100.00
		*	

DO NOT TOUCH

SAMPLE IN PROGRESS

TERRACON PROJECT NUMBER: 07107020
PROJECT LOCATION: Waterles, MV
DATE INSTALLED: 4/78///
TIME INSTALLED: /319
ADDRESS INSTALLED: TA 2227 E474 St
SAMPLE ID: IAB
SAMPLE LOCATION: top of drier in NE comer,
South of water main
DEVICE #: 1407 CONTROLLER#: 16 1137
LAB ID #:
RETRIEVAL DATE:
PLANNED RETRIEVAL TIME: 1 3/9
ACTUAL RETRIEVAL TIME: 1605
TERRACON REPRESENTATIVE: July 1918
comments: 28,5 in 5



FOR INFORMATION CALL 563-355-0702

870 40th Avenue Bettendorf, Iowa 52722

Residence ID:	38	Address:	2227 E 44 Street
Sample ID:	TA-38-ME	Location:	Waterlow, IA
Date:	4/28/11 + 4/29/11	Time:	1305
Sampler(s):	JME IRPB	Summa Canister ID:	1426
Flow Controller ID:	11484	Flow Controller Rate Setting (cc/min):	24 hour
Start Time:	1314	Finish Time:	1602
Pre-Sampling Vacuum (in Hg):	29.5 in the	Post-Sampling Vacuum (in Hg):	-4 in Hg on 4/2
Organic Vapor Reading (ppm):		PID used:	
Summa Canister went to Ambient?	Yes / No	Method:	Grab
Comments:	in conte of maint	hear lying / Kit	then cuty, about
Sketch:	10.5	·	
		38	

DO NOT TOUCH

SAMPLE IN PROGRESS

TERRACON PROJECT NUMBER: 67107020
PROJECT LOCATION: Water to TA
DATE INSTALLED: 4/28/11
TIME INSTALLED: 1114
ADDRESS INSTALLED: ZZZZZ E 4 4 Street
SAMPLE ID: ZAMF
SAMPLE LOCATION: On fon of missing by cutu
to living spoin. I Tal above around
DEVICE #: 1426' CONTROLLER#: 17484
LAB ID #:
RETRIEVAL DATE: 4/24/11
PLANNED RETRIEVAL TIME: _ 1300
ACTUAL RETRIEVAL TIME: 1602
TERRACON REPRESENTATIVE: Jac
COMMENTS: 795 in Ha -



FOR INFORMATION CALL 563-355-0702

870 40th Avenue Bettendorf, Iowa 52722



Name of Resident:

Date of Visit: 4/79/7011
Time of Arrival: \310 Time of Departure: 1610
Names of Terracon Representatives: Jun clancy
Justin enwall
Introduce Terracon Representatives and Show Terracon Identification
Verify identity of resident; confirm authority to allow entry
Explain purpose of visit (check as appropriate):
Sample Port Installation Sub-Slap Vapor Sampling + Dup
Completion of Questionnaire Indoor Air Sampling Canister Installation
Indoor Air Sampling Canister Outdoor Air Sampling Removal ₹2
Other [Explain:]
Explain if follow-up visits will occur and verify date/time of follow-up visits as appropriate.
Date of Follow-Up Visit:
Time of Follow-Up Visit:
Items Completed as Noted:
Terracon Representative Signature Povide letter
Resident erganization

Sample ID: SS - 38 Location: Water Wo Date: 4/24/201 Time: 13/10 Sampler(s): Summa Canister ID: S - 153 0 Flow Controller ID: D Flow Controller Rate Setting (cc/min): Start Time: 13/17 Finish Time: 1357 Pre-Sampling Vacuum (in Hg): -2 Organic Vapor Reading (ppm): SS: PID used: Win PAE 3 000 Summa Canister Went to Ambient? Yes / No Method: TD // S Grab Comments:	Sample ID: SS-38 Location: Water Loo Date: 4/24/201 Time: 1310 Sampler(s): Summa Canister ID: S-153 D Flow Controller ID: 10 Flow Controller Rate Setting (cc/min): Start Time: 1317 Finish Time: 1357 Pre-Sampling Vacuum (in Hg): -2 Organic Vapor Reading (ppm): SS: PID used: With PAE 3 2000 Summa Canister Went to Ambient? Yes / No Method: 70 / S Grab Comments:	Sample ID: SS-38 Location: Water Loo Date: 4/24/201 Time: 1310 Sampler(s): Summa Canister ID: S-153 D Flow Controller ID: 10 Flow Controller Rate Setting (cc/min): Start Time: 1317 Finish Time: 1357 Pre-Sampling Vacuum (in Hg): -2 Organic Vapor Reading (ppm): SS: PID used: With PAE 3 2000 Summa Canister Went to Ambient? Yes / No Method: 70 / S Grab Comments:	Sample ID: SS-38 Location: Water No Date: 4/24/207 Time: 1310 Sampler(s): Summa Canister ID: S-153 D Flow Controller ID: D Flow Controller Rate Setting (cc/min): Flow Controller ID: Finish Time: I357 Per-Sampling Vacuum (in Hg): -20 Organic Vapor Reading (ppm): SS: PID used: With PAC 3000 Summa Canister Went to Ambient? Yes / No Method: TD / S Grab Sketch:	(50.00)	7		
Date: 4/20/201 Time: 13/0 Sampler(s): ymc ymc Summa Canister ID: S - 153 D Flow Controller ID: D Flow Controller Rate Setting (cc/min): Start Time: 13/7 Finish Time: 13/7 Pre-Sampling Vacuum (in Hg): -2 Post-Sampling Vacuum (in Hg): -2 Organic Vapor Reading (ppm): SS: PID used: ymin PATE 3 000 Summa Canister Went to Ambient? Yes / No Method: TD / S Grab	Date: 4/20/201 Time: 13/0 Sampler(s): ymc ymc Summa Canister ID: S - 153 D Flow Controller ID: D Flow Controller Rate Setting (cc/min): Start Time: 13/7 Finish Time: 13/7 Pre-Sampling Vacuum (in Hg): -2 Post-Sampling Vacuum (in Hg): -2 Organic Vapor Reading (ppm): SS: PID used: ymin PATE 3 000 Summa Canister Went to Ambient? Yes / No Method: TD / S Grab	Date: 4/24/201 Time: 1310 Sampler(s): Smc Jame Summa Canister ID: \$-153 D Flow Controller ID: 15 Flow Controller Rate Setting (cc/min): Start Time: 1317 Finish Time: 1357 Pre-Sampling Vacuum (in Hg): -2 Post-Sampling Vacuum (in Hg): -2 Organic Vapor Reading (ppm): SS: PID used: min PAC 3 DD Summa Canister went to Amblent? Yes / No Method: TD:\S Grab Sketch:	Date: 4/24/201 Time: 1310 Sampler(s): Smc Jame Summa Canister ID: \$-153 D Flow Controller ID: 15 Flow Controller Rate Setting (cc/min): Start Time: 1317 Finish Time: 1357 Pre-Sampling Vacuum (in Hg): -2 Post-Sampling Vacuum (in Hg): -2 Organic Vapor Reading (ppm): SS: PID used: min PAC 3 DD Summa Canister went to Amblent? Yes / No Method: TD:\S Grab Sketch:	Residence ID:	38	Address:	2227 F 4th St
Sampler(s): Summa Canister ID: Summa Caniste	Sampler(s): Summa Canister ID: Summa Caniste	Sampler(s): Summa Canister ID: Summa Caniste	Sampler(s): Summa Canister ID: Summa Caniste	Sample ID:	55-38	Location:	Waterloo
Flow Controller ID: To Flow Controller Rate Setting (cc/min): Start Time: 1317 Finish Time: 1357 Pre-Sampling Post-Sampling Vacuum (in Hg): -2 Organic Vapor Reading (ppm): SS: PID used:	Flow Controller ID: To Flow Controller Rate Setting (cc/min): Start Time: 1317 Finish Time: 1357 Pre-Sampling Post-Sampling Vacuum (in Hg): -2 Organic Vapor Reading (ppm): SS: PID used:	Flow Controller ID: D Flow Controller Rate Setting (cc/min): Start Time: 1317 Finish Time: 1357 Pre-Sampling Vacuum (in Hg): -2 Organic Vapor Reading (ppm): SS: PID used: WWW PARE 3000 Summa Canister went to Ambient? Yes / No Method: TD:\S Grab Sketch:	Flow Controller ID: D Flow Controller Rate Setting (cc/min): Start Time: 1317 Finish Time: 1357 Pre-Sampling Vacuum (in Hg): -2 Organic Vapor Reading (ppm): SS: PID used: WWW PARE 3000 Summa Canister went to Ambient? Yes / No Method: TD:\S Grab Sketch:	Date:	4/20/2017	Time:	1310
Flow Controller ID: To Flow Controller Rate Setting (cc/min):	Flow Controller ID: To Flow Controller Rate Setting (cc/min):	Flow Controller ID: To	Flow Controller ID: To	Sampler(s):	ime Ime	Summa Canister ID:	S-1530
Pre-Sampling Vacuum (In Hg): Organic Vapor Reading (ppm): Summa Canister went to Ambient? Post-Sampling Vacuum (In Hg): -2 PiD used: Win PAC 3000 Method: TO 15 Grab Comments:	Pre-Sampling Vacuum (In Hg): Organic Vapor Reading (ppm): Summa Canister went to Ambient? Post-Sampling Vacuum (In Hg): -2 PiD used: Win PAC 3000 Method: TO 15 Grab Comments:	Pre-Sampling Vacuum (in Hg): - 29 Organic Vapor Reading (ppm): SS: Summa Canister went to Ambient? Comments: Sketch:	Pre-Sampling Vacuum (in Hg): - 29 Organic Vapor Reading (ppm): SS: Summa Canister went to Ambient? Comments: Sketch:	Flow Controller ID:	2		
Vacuum (in Hg): Organic Vapor Reading (ppm): SS: Summa Canister went to Ambient? Yes / No Method: Vacuum (in Hg): PID used: White 3000 TO 15 Grab Comments:	Vacuum (in Hg): Organic Vapor Reading (ppm): SS: Summa Canister went to Ambient? Yes / No Method: Vacuum (in Hg): PID used: White 3000 TO 15 Grab Comments:	Vacuum (in Hg): - 24	Vacuum (in Hg): - 24	Start Time:	1317	Finish Time:	1357
Reading (ppm): SS: Summa Canister went to Amblent? Yes / No Method: TD:\S Grab Comments:	Reading (ppm): SS: Summa Canister went to Amblent? Yes / No Method: TD:\S Grab Comments:	Reading (ppm): SS: Summa Canister went to Ambient? Comments: Sketch:	Reading (ppm): SS: Summa Canister went to Ambient? Comments: Sketch:		-29		-2
Summa Canister went to Ambient? Yes / No Method: TD \ S Grab Comments:	Summa Canister went to Ambient? Yes / No Method: TO 1 S Grab Comments:	Summa Canister Went to Amblent? Yes / No Method: TD :\ S Grab Comments: Sketch:	Summa Canister Went to Amblent? Yes / No Method: TD :\ S Grab Comments: Sketch:			PID used:	miniPAE 3000
		Sketch:	Sketch:		Yes / No	Method:	TO 18 Grab
		~		Sketch:			

414 324 4673
PROJECT: Chamberlain Manufactury Corpornton Page 1 of 1 JOB NO. 07107020 Date 4-26-11 Comp. By JE/MA CHECKED BY:
2227 E. 4 th st.
Can see soil where stairs go go through About Stairs go go through Stairs go
Concrete apening exposed, eg- see soil below concrete chain 12 concrete sleb ~ 6" higher then main bese, Crawlspace Ort Close
$\leftarrow N$

Summa Canister went to Ambient? Yes / No Method: TD-\S Grab Comments:	Residence ID:	38	Address:	2227 E 4th st
Sampler(s): Sampler(s): Summa Canister ID: Grow Controller ID: Flow Controller Rate Setting (cc/min): Start Time: 1317 Finish Time: 1357 Post-Sampling Vacuum (in Hg): Organic Vapor Reading (ppm): Summa Canister Ves / No Method: Method: Method: Sketch:	Sample ID:	SSD-38	Location:	Waterloo
Flow Controller ID: The Setting (cc/min): Start Time: The Sampling (cc/min): Flow Controller Rate Setting (cc/min): Flow	Date:	4/20/2011	Time:	1310
Flow Controller ID: The Start Time: Start Time: Finish Time: Finish Time: Post-Sampling Vacuum (in Hg): PiD used: MuniPate BC Summa Canister Went to Ambient? Yes / No Method: Method: Sketch:	Sampler(s):	× (*	Summa Canister ID:	92042
Pre-Sampling Vacuum (in Hg): Organic Vapor Reading (ppm): Summa Canister went to Ambient? Comments: Sketch:	Flow Controller ID:	7)		
Pre-Sampling Vacuum (in Hg): Organic Vapor Reading (ppm): SS: 0.7444 Yes / No Method: Comments: Sketch:	Start Time:	1317	Finish Time:	1357
Summa Canister went to Ambient? Comments: Sketch:		-21		- 2
Summa Canister went to Ambient? Yes / No Method: TO-\S Grab Comments: Sketch:		ss. o. znom	PID used:	miniPAE 8000
	Summa Canister went to Ambient?		Method:	TO:15 Grab
Sketch:				
	Sketch:		A 1 8 300 000	31-3000
			~	

Name of Resident:

Date o	of Visit: 4(27/201
Time (of Arrival: 515 Time of Departure: 1000
Name	s of Terracon Representatives: Jen Clancy
	justin enwall
\times	Introduce Terracon Representatives and Show Terracon Identification
\times	Verify identity of resident; confirm authority to allow entry
\angle	Explain purpose of visit (check as appropriate):
	Sample Port Installation Sub-Slap Vapor Sampling
	Completion of Questionnaire Indoor Air Sampling Canister Installation
	Indoor Air Sampling Canister Outdoor Air Sampling Removal
	Other [Explain:]
 3	Explain if follow-up visits will occur and verify date/time of follow-up visits as appropriate.
	Date of Follow-Up Visit: 4/19
	Time of Follow-Up Visit:
Items	Completed as Noted:
Q	und Marcy
Temac	on Representative Signature

Date and Time of Visit: (37) \ 4127 (21)

Sampling Port Installation Checklist

X	Work with resident to identify mutually agreeable area to install port in lowest occupied level of home.				
Precau	Precautions to be taken to protect floor coverings, if applicable:				
N					
<u>A</u>	Install sampling port in accordance with work plan procedures.				
$\perp \chi$	Clean up any debris.				
X	Invite homeowner to view installed port and explain necessary precautions to prevent disturbance of it while it cures.				
Items	Completed as Noted:				
	cunter Il Clancus				
Terra	con Representative Signature				
7					



Date o	f Visit: 4 29 2011	
Time (of Arrival: 1430	Time of Departure: 3. 48 h
Names	s of Terracon Representatives:	jen clancy
		Justin enwall
X	Introduce Terracon Representat	ives and Show Terracon Identification
X	Verify identity of resident; conf	firm authority to allow entry
<u>/</u>	Explain purpose of visit (check	as appropriate):
	Sample Port Installation	Sub-Slap Vapor Sampling
	Completion of Questionn	Indoor Air Sampling Canister Installation
	Indoor Air Sampling Car Removal	nister Outdoor Air Sampling
	Other [Explain:	
	Explain if follow-up visits will appropriate.	occur and verify date/time of follow-up visits as
	Date of Follow-Up Visit:	
	Time of Follow-Up Visit:	
Items	Completed as Noted:	~
Ju	info Molancy	
Vetrac	on Representative Signature	100 ms/2/15
		1 4/29/50

Residence ID:	39	Address:	2233 E4th St
Sample ID:	SS:39	Location:	waterloo
Date:	4/29/2011	Time:	1430
Sampler(s):	Ima line	Summa Canister ID:	læ38le
Flow Controller ID:	ll ll	Flow Controller Rate Setting (cc/min):	
Start Time:	1443	Finish Time:	1519
Pre-Sampling Vacuum (in Hg):	-28	Post-Sampling Vacuum (in Hg):	-1
Organic Vapor Reading (ppm):	amblend: 1.3 ppm SS: 0.2 ppm	PID used:	miniPAE 3000
Summa Canister went to Ambient?	Yes / No	Method:	TO Grab
Sketch: N	32' - 15' - op	IF'	@ floordraw op: port C=chimney F=furnace W= Water heater
)		



Date o	f Visit: 4/24/2011
Time o	of Arrival: 130 Time of Departure: 210
Names	of Terracon Representatives: Win homers
	Jun Clancy
\times	Introduce Terracon Representatives and Show Terracon Identification
$\overline{\times}$	Verify identity of resident; confirm authority to allow entry
<u>X</u>	Explain purpose of visit (check as appropriate):
	Sample Port Installation Sub-Slap Vapor Sampling
	Completion of Questionnaire Indoor Air Sampling Canister Installation
	Indoor Air Sampling Canister Outdoor Air Sampling Removal
	Other [Explain:]
$\overline{\prec}$	Explain if follow-up visits will occur and verify date/time of follow-up visits as appropriate.
	Date of Follow-Up Visit: 5/2 6 5/3
	Time of Follow-Up Visit: \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\
Items (Completed as Noted:
Jes	und M. Clancy
Tefrac	on Representative Signature
Reside	ant Signature



Date and Time of Visit: 4 27 267 3130

Sampling Port Installation Checklist

\times	Work with resident to identify mutually agreeable area to install port in lowest occupied level of home.
Precau	ations to be taken to protect floor coverings, if applicable:
10-00-	
	Install sampling port in accordance with work plan procedures.
X	Clean up any debris.
X	Invite homeowner to view installed port and explain necessary precautions to prevent disturbance of it while it cures.
Items	Completed as Noted:
Terrac	con Representative Signature
Resta	on organie



Date o	e of Visit: $\frac{5 \lambda }{200}$	
	e of Arrival: \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	
Names	nes of Terracon Representatives: Yen dancey	- Os.
	nes of Terracon Representatives: Jen clancy	21
(Introduce Terracon Representatives and Show Terracon	
3 	Verify identity of resident; confirm authority to allow er	ntry
	Explain purpose of visit (check as appropriate):	
	Sample Port Installation Sul	b-Slap Vapor Sampling
	Completion of Questionnaire In In	ndoor Air Sampling Canister
	Indoor Air Sampling Canister Out Removal	door Air Sampling 42
	Other [Explain:]	
X	Explain if follow-up visits will occur and verify date/tin appropriate.	ne of follow-up visits as
	Date of Follow-Up Visit: 5 3 250	
	Time of Follow-Up Visit: \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	
Items (s Completed as Noted:	
	Jenny M. Clancer	
	dent Signature	



Street Address: 2237 7 17 57

Name of Resident:

Date and Time of Visit: 1200 5/2/201/

Indoor Air Sampling Canister Installation Checklist

X	Verify that heating/cooling system has been operating for at least 24 hours and that doors and windows have only been opened incidentally.
X_	Work with homeowner to identify an unobtrusive spot for canister to be placed consistent with work plan requirements.
\overline{X}	Explain precautions to be taken while the canister collects the samples.
+	Arrange for visit to remove canister:
Ľ	Date:
	Time: (200
Items (Completed as Noted:
Derrac	on Representative Signiture
Reside	ent Signature

40	Address:	2237 E 9Th St
1A+ B . 40	Location:	2237 EATH ST Washirlou
sızıznı	Time:	1200
mrc/fme	Summa Canister ID:	7465
K-384	Flow Controller Rate Setting (colmin):	
1212	Finish Time:	1520 5/3
८ -३०	Post-Sampling Vacuum (in Hg):	-4
	PID used:	
Yes / No	Method:	Grab
J		
	x a	
	1A+ B. 40 512/201 pwc /pme Y-384 1212 4-30	

DO NOT TOUCH

SAMPLE IN PROGRESS

TERRACON	PROJECT NUMBER:	07107020
----------	-----------------	----------

PROJECT LOCATION: Westerlos

DATE INSTALLED: 5 2 201

TIME INSTALLED: 1212

ADDRESS INSTALLED: 2237 E 4th St

SAMPLE ID: 1A-13-40

SAMPLE LOCATION: SWC of basement on shelves

DEVICE #: 7465 CONTROLLER#: K386

LAB ID #:

RETRIEVAL DATE: 5/3/201

PLANNED RETRIEVAL TIME: 12/2

ACTUAL RETRIEVAL TIME: 1570

TERRACON REPRESENTATIVE:

COMMENTS:



FOR INFORMATION CALL 563-355-0702

870 40th Avenue Bettendorf, Iowa 52722

Residence ID:	40	Address:	2237 E 4th St
Sample ID:	N-1-40	Location:	Waterloo
Date:	5/2/2011	Time:	1200
Sampler(s):	mc/jme	Summa Canister ID:	9805 B
Flow Controller ID:	1407	Flow Controller Rate Setting (cc/min):	10000 1000 1000 1000 1000 1000 1000 10
Start Time:	1207	Finish Time:	1209 513
Pre-Sampling Vacuum (in Hg):	-27	Post-Sampling Vacuum (in Hg):	- 3
Organic Vapor Reading (ppm):		PID used:	
Summa Canister went to Ambient?	Yes / No	Method:	Grab
Comments:	*		
Sketch:	ansova:		
		<u>.</u>	
		a	
		± €	

DO NOT TOUCH

SAMPLE IN PROGRESS

TERRACON PROJECT NUMBER: ๑๘๘๑๘๐
PROJECT LOCATION: WAY 600
DATE INSTALLED: 5/1/20)
TIME INSTALLED:
ADDRESS INSTALLED: 2237 E 4th St
SAMPLE ID: 1A-1-40
SAMPLE LOCATION: Katchen on hop of fridge
DEVICE #: 98058 CONTROLLER#: \ 407
LAB ID #:
RETRIEVAL DATE: 53 (20)
PLANNED RETRIEVAL TIME: \20th
ACTUAL RETRIEVAL TIME: 1705 513
TERRACON REPRESENTATIVE: WWW. WWW
COMMENTS:



FOR INFORMATION CALL 563-355-0702

870 40th Avenue Bettendorf, Iowa 52722

Residence ID:	40	Address:	2237 F 4th A
Sample ID:	AA-40	Location:	Wasterloo
Date:	5/2/2011	Time:	1200
Sampler(s):	Amo Jame	Summa Canister ID:	11352
Flow Controller ID:	K153	Flow Controller Rate Setting (cc/min):	
Start Time:	1222	Finish Time:	1524
Pre-Sampling Vacuum (in Hg):	-29.5	Post-Sampling Vacuum (in Hg):	-3.5 ³ / ₃
Organic Vapor Reading (ppm):		PID used:	
Summa Canister went to Ambient?	Yes / No	Method:	Grab
Comments:			
Sketch:	70	do est <u>title</u> de de la com e	
			8
		,	
		49	

Residence ID:	40	Address:	2234 E 4th st
Sample ID:	AA5-40	Location:	Water 100
Date:	612/3011	Time:	1200
Sampler(s):	Ino Ifme	Summa Canister ID:	HE 1352N
Flow Controller ID:	KALZ	Flow Controller Rate Setting (cc/min):	
Start Time:	1222	Finish Time:	1524
Pre-Sampling Vacuum (în Hg):	- 29.5	Post-Sampling Vacuum (in Hg):	-2
Organic Vapor Reading (ppm):		PID used:	
Summa Canister went to Ambient?	Yes / No	Method:	Grab
Comments:			
Sketch:		(%2	

DO NOT TOUCH

SAMPLE IN PROGRESS

TERRACON PROJECT NUMBER: 07107020
PROJECT LOCATION: WELLV 100
DATE INSTALLED: 5/2/1011
TIME INSTALLED:
ADDRESS INSTALLED: 2237 E 4th St
SAMPLE ID: AA-40 (KAD-40
SAMPLE LOCATION: Badagard - W sade of house on
DEVICE #: 1362 CONTROLLER#: 144.2
LAB ID #:
RETRIEVAL DATE: 5/3/2011
PLANNED RETRIEVAL TIME: \220
ACTUAL RETRIEVAL TIME:
TERRACON REPRESENTATIVE: Ave Jame
U U
COMMENTS:



FOR INFORMATION CALL 563-355-0702 870 40th Avenue

Bettendorf, Iowa 52722



Date o	f Visit: 5/3/201
	of Arrival: 1700 Time of Departure: 1300 1520/1530
Names	of Terracon Representatives:
<u></u> 88	Introduce Terracon Representatives and Show Terracon Identification
 4	Verify identity of resident; confirm authority to allow entry
X	Explain purpose of visit (check as appropriate):
ži.	Sample Port Installation Sub-Slap Vapor Sampling
	Completion of Questionnaire Indoor Air Sampling Canister Installation
	Indoor Air Sampling Canister Removal & Outdoor Air Sampling Veryword & 2
	Other [Explain:]
	Explain if follow-up visits will occur and verify date/time of follow-up visits as appropriate.
	Date of Follow-Up Visit:
	Time of Follow-Up Visit:
Items (completed as Noted:
Keside	

_(-0		1	
Residence ID:	40	Address:	2237 E4th St
Sample ID:	SS-40	Location:	Waterloo
Date:	5(3)2011	Time:	1200
Sampler(s):	mul/me	Summa Canister ID:	04306
Flow Controller ID:	167	Flow Controller Rate Setting (cc/min):	
Start Time:	1216	Finish Time:	12.58
Pre-Sampling Vacuum (in Hg):	-28.5	Post-Sampling Vacuum (in Hg):	-2.5
Organic Vapor Reading (ppm):	ambient: 0,5 SS': 0,2	PID used:	mm KATE 3000
Summa Canister went to Ambient?	Yes / No	Method:	Grab
Comments:			
Sketch:	N -12' - 25 For CW -87	F-10'-1 40'	F=furvace C=chimney W-Hzwheater Op=port @fworderin



Date o	f Visit: 4 127	
Time (of Arrival: 3 ³ / ₂ 0	Time of Departure:
Names	s of Terracon Representatives:	John Bringer
		Ja Claver
X	Introduce Terracon Representat	ves and Show Terracon Identification
X	Verify identity of resident; conf	irm authority to allow entry
×	Explain purpose of visit (check	as appropriate):
	Sample Port Installation	Sub-Slap Vapor Sampling
	X Completion of Questionn.	Indoor Air Sampling Canister Installation
	Indoor Air Sampling Car Removal	ister Outdoor Air Sampling
	Other [Explain:	
X	Explain if follow-up visits will appropriate.	occur and verify date/time of follow-up visits as
	Date of Follow-Up Visit: 5/2	05/3
	Time of Follow-Up Visit: 3	pm
Items (Completed as Noted:	
Jer	und M. Clancer	
Terrac	on Representative Signature	



Street Address: 2413 F 4th St

Name of Resident

Date and Time of Visit: Any 201 330

Sampling Port Installation Checklist

X	Work with resident to identify mutually agreeable area to install port in lowest occupied level of home.
Precau	ntions to be taken to protect floor coverings, if applicable:
95	
Ne se	
ARTIS - E	
¥	Install sampling port in accordance with work plan procedures.
$\not \propto$	Clean up any debris.
- X	Invite homeowner to view installed port and explain necessary precautions to prevent disturbance of it while it cures.
Items	Completed as Noted:
Ju	unh M. Clancy
Terrac	con Representative Signature



Street Address: 2413 = 4th st
Name of Resident:

Date o	of Visit: _5/2/201
Time (of Arrival: 1545 Time of Departure: 1545
Name	s of Terracon Representatives: <u>Xin dancin</u>
	Justin entwood P
*	Introduce Terracon Representatives and Show Terracon Identification
_>	Verify identity of resident; confirm authority to allow entry
K	Explain purpose of visit (check as appropriate):
	Sample Port Installation Sub-Slap Vapor Sampling
	Completion of Questionnaire Indoor Air Sampling Canister Installation
	Indoor Air Sampling Canister Outdoor Air Sampling Removal
	Other [Explain:]
*	Explain if follow-up visits will occur and verify date/time of follow-up visits as appropriate.
	Date of Follow-Up Visit: 5/3/2011
	Time of Follow-Up Visit: 330
Items	Completed as Noted:
Terrac	on/Representative Signature
Reside	ent Signature

Name of Resident:

Date and Time of Visit: 5/2/2011, 1530

Indoor Air Sampling Canister Installation Checklist

\times	Verify that heating/cooling system has been operating for at least 24 hours and that doors and windows have only been opened incidentally.
<u> </u>	Work with homeowner to identify an unobtrusive spot for canister to be placed consistent with work plan requirements.
<u>X</u>	Explain precautions to be taken while the canister collects the samples.
+	Arrange for visit to remove canister:
. •	Date: 5 3 201
	Time:330
Items (Completed as Noted:
<u>Qua</u>	mater M. Clarcy J

-7-CHI- 1798719v1

Residence ID:	45	Address:	2413 F44 8
Sample ID:	1A-B-45	Location:	WaterNoo
Date:	SIZIZON	Time:	1530
Sampler(s):	Inc Ime	Summa Canister ID:	93149
Flow Controller ID:	K371	Flow Controller Rate Setting (cc/min):	
Start Time:	1543	Finish Time:	1633 5/3
Pre-Sampling Vacuum (in Hg):	-30	Post-Sampling Vacuum (in Hg):	-4.5
Organic Vapor Reading (ppm):		PID used:	
Summa Canister went to Ambient?	Yes / No	Method:	Grab
	Basement - mai		, wate
	*	<u> </u>	***************************************
Sketch:			
Sketch:		€ ?	
Sketch:			
Sketch:		≈ €	
Sketch:			

DO NOT TOUCH

SAMPLE IN PROGRESS

TERRACON PROJECT NUMBER: 0700 7020
PROJECT LOCATION: Watchloo
DATE INSTALLED: SIN WILL
TIME INSTALLED:
ADDRESS INSTALLED: 2413 E 4th Gt
SAMPLE ID: 1A-B-4S
SAMPLE LOCATION: Bestement
DEVICE #: 93149 CONTROLLER#: V371
LAB ID #:
RETRIEVAL DATE: 5/3/11
PLANNED RETRIEVAL TIME:
ACTUAL RETRIEVAL TIME: 1533
TERRACON REPRESENTATIVE: MAC MAR
11.0
COMMENTS:



FOR INFORMATION CALL 563-355-0702

870 40th Avenue Bettendorf, lowa 52722

Residence ID:	45	Address:	2413 E HATU SY
Sample ID:	1A-1-4S	Location:	Waterlow
Date:	કારાજ્ય	Time:	VS30
Sampler(s):	Smc/fine	Summa Canister ID:	7490
Flow Controller ID:	K471	Flow Controller Rate Setting (cc/min):	7508 V 200
Start Time:	1537	Finish Time:	1537
Pre-Sampling /acuum (in Hg):	-25/	Post-Sampling Vacuum (in Hg):	-2
Organic Vapor Reading (ppm):		PID used:	
Summa Canister vent to Ambient?	Yes / No	Method:	Grab
Comments:	SE Born on to	able	ŝ
iketch:		AND SECOND SECON	2000
iketch:		100 TO	(5/15/)
iketch:			(SALES)
	×		(SAAR)K
		,	(5.16.)
	15	,	(SAAB)K
		•	

DO NOT TOUCH

SAMPLE IN PROGRESS

TERRACON PROJECT	
PROJECT LOCATION:	Winterloo

DATE INSTALLED: 5/2/2011

TIME INSTALLED: \S37

ADDRESS INSTALLED: 2413 & 4th st

SAMPLE ID: 1A-1-45

SAMPLE LOCATION:____

DEVICE #: 749U CONTROLLER#: ¥471

LAB ID #:

RETRIEVAL DATE: 5/3/2011

PLANNED RETRIEVAL TIME: 1537

ACTUAL RETRIEVAL TIME: 1537

TERRACON REPRESENTATIVE:

COMMENTS:



FOR INFORMATION CALL 563-355-0702

870 40th Avenue Bettendorf, Iowa 52722



Street Address: 2413 E 4th 5}
Name of Resident:

Date of V	Visit: 5/3/201
Time of A	Arrival: \S30 Time of Departure: \(\lambda 3\)
Names o	f Terracon Representatives: Jen Clancy
	justin en wall
In	ntroduce Terracon Representatives and Show Terracon Identification
V	erify identity of resident; confirm authority to allow entry
<u> </u>	xplain purpose of visit (check as appropriate):
_	Sample Port Installation Sub-Slap Vapor Sampling
_	Completion of Questionnaire Indoor Air Sampling Canister Installation
-	✓ Indoor Air Sampling Canister Outdoor Air Sampling Removal ∠ ≥
	Other [Explain:]
0.	xplain if follow-up visits will occur and verify date/time of follow-up visits as ppropriate.
D	Pate of Follow-Up Visit:
T	ime of Follow-Up Visit:
Items Co	mpleted as Noted:
·llu	wallClancy
Torracon	Dedragantativa Libratura

Residence ID:	45	Address:	2413 E441084
Sample ID:	245 Ed SS-45	Location:	Wasterlar
Date:	5/3/2011	Time:	1530
Sampler(s):	ymc lyme	Summa Canister ID:	7-78
Flow Controller ID:	178	Flow Controller Rate Setting (cc/min):	ts 2000 to
Start Time:	1552	Finish Time:	1428
Pre-Sampling Vacuum (in Hg):	-29.5	Post-Sampling Vacuum (in Hg):	-1.5
Organic Vapor Reading (ppm):	ambreut:0.2 SK:1.1 ppm	PID used:	mulate 3000
Summa Canister went to Ambient?	Yes (No	Method:	Grab
Sketch:	35 K		W=Waterheaty F=furrace Op=port D furrdram C-Churry
	96		



Date of	f Visit: <u> </u>
	of Arrival: 10:3c Time of Departure: 1130
Names	of Terracon Representatives:
143	Mark Anderson
$\frac{1}{2}$	Introduce Terracon Representatives and Show Terracon Identification
<u>v</u> ,	Verify identity of resident; confirm authority to allow entry
<u>/</u>	Explain purpose of visit (check as appropriate):
	Sample Port Installation Sub-Slap Vapor Sampling
	Completion of Questionnaire Indoor Air Sampling Canister Installation
	Indoor Air Sampling Canister Outdoor Air Sampling Removal
	Other [Explain:]
<u>~</u>	Explain if follow-up visits will occur and verify date/time of follow-up visits as appropriate.
	Date of Follow-Up Visit: 5/2/11 and 5/3/11
	Time of Follow-Up Visit: 10:0D AM
Items (Completed as Noted:
	Just Celes
Terrace	on Representative Signature
Reside	nt Signature



Street Address: 2417 E. 4th ST Name of Resident:

Date and Time of Visit: 4-27-11 @ 10:30

Sampling Port Installation Checklist

1	
<u>v</u>	Work with resident to identify mutually agreeable area to install port in lowest occupied level of home.
Preca	utions to be taken to protect floor coverings, if applicable:
<u>\(\lambda \)</u>	Install sampling port in accordance with work plan procedures.
,	Clean up any debris.
	Invite homeowner to view installed port and explain necessary precautions to prevent disturbance of it while it cures.
	ø.
Itama	Completed as Noted
	Completed as Noted:
_4	Just lew
Terra	con Representative Signature
Resid	ent Signature



Date of V	Visit: S/2(70)
Time of	Arrival: 100 5 Time of Departure: 1077
Names o	f Terracon Representatives:
	Justin ennall
In	atroduce Terracon Representatives and Show Terracon Identification
v	erify identity of resident; confirm authority to allow entry
X E	xplain purpose of visit (check as appropriate):
	Sample Port Installation Sub-Slap Vapor Sampling
<u> 22</u>	Completion of Questionnaire Y Indoor Air Sampling Canister Installation *2
_	Indoor Air Sampling Canister Outdoor Air Sampling Removal
Q <u></u>	Other [Explain:
	xplain if follow-up visits will occur and verify date/time of follow-up visits as ppropriate.
D	Pate of Follow-Up Visit: 513/WM
T	Time of Follow-Up Visit: \\\ \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\
Items Co	impleted as Noted:
Jenn	In M. Claneux
Terracon	Representative Signature



Street Address: 2417 E 4th 8t

Name of Resident:

Date and Time of Visit: 512/201 1000

Indoor Air Sampling Canister Installation Checklist

X	Verify that heating/cooling system has been operating for at least 24 hours and that doors and windows have only been opened incidentally.
X	Work with homeowner to identify an unobtrusive spot for canister to be placed consistent with work plan requirements.
	Explain precautions to be taken while the canister collects the samples.
X	Arrange for visit to remove canister:
	Date:5/3/2M
	Time:
Items (Completed as Noted:
Terrac	on Representative Signature

VAPOR INTRUSION CHARACTERIZATION WORK PLAN CHAMBERLAIN MANUFACTURING CORPORATION

FORMER FACILITY AT 550 ESTHER STREET WATERLOO, IOWA

Manger #8

Residence ID:	46	Address:	29PA E Ath St
Sample ID:	1A-B-4	Location:	Watrlo
Date:	shlm	Time:	1011
Sampler(s):	ma line	Summa Canister ID:	D[8]
Flow Controller ID:	X 269	Flow Controller Rate Setting (cc/min):	
Start Time:	1011	Finish Time:	1015
Pre-Sampling Vacuum (in Hg):	-27	Post-Sampling Vacuum (in Hg):	-3
Organic Vapor Reading (ppm):		PID used:	
Summa Canister went to Ambient?	Yes / No	Method:	Grab
Sketch:			

DO NOT TOUCH

SAMPLE IN PROGRESS

TERRACON PROJ	ECT NUMBER: 07107070
---------------	----------------------

PROJECT LOCATION: WILLWAYD

DATE INSTALLED: 5/2/201

TIME INSTALLED: 1011

ADDRESS INSTALLED:

SAMPLE ID: 148 TA-13-46

SAMPLE LOCATION: Basewert chair in ceretural vm

DEVICE #: 0181 CONTROLLER#: \2269

LAB ID #:

RETRIEVAL DATE: 5/3/2011

PLANNED RETRIEVAL TIME: WIL

ACTUAL RETRIEVAL TIME: 1015

TERRACON REPRESENTATIVE: XMA

COMMENTS:



FOR INFORMATION CALL 563-355-0702

870 40th Avenue Bettendorf, Iowa 52722

Complex

VAPOR INTRUSION CHARACTERIZATION WORK PLAN CHAMBERLAIN MANUFACTURING CORPORATION FORMER FACILITY AT 550 ESTHER STREET WATERLOO, IOWA

Residence ID:	476	Address:	2414 EATH ST
Sample ID:	1A-1-416	Location:	watwho
Date:	siziari	Time:	1008
Sampler(s):	Inc Ifre	Summa Canister ID:	7482
Flow Controller ID:	K387	Flow Controller Rate Setting (cc/min):	
Start Time:	1008	Finish Time:	1152
Pre-Sampling Vacuum (in Hg):	-30	Post-Sampling Vacuum (in Hg):	- 5
Organic Vapor Reading (ppm):	\$1	PID used:	
Summa Canister went to Ambient?	Yes I(No)	Method:	Grab
Comments:		and a Lancauck and the	
Sketch:) (3. 10. 10. 10. 10. 10. 10. 10. 10. 10. 10
Sketch:			
		8	
	¥3		

DO NOT TOUCH

SAMPLE IN PROGRESS

TERRACON	PROJECT	NUMBER:	07107020
----------	---------	---------	----------

PROJECT LOCATION: 2421 E 4th St - Waterloo

DATE INSTALLED: 5/2/2011

TIME INSTALLED: 100%

ADDRESS INSTALLED: Same

SAMPLE ID: \A-1-47

SAMPLE LOCATION: NW Bolym on druser

DEVICE #: 7482 CONTROLLER#: 1/387

LAB ID #:

RETRIEVAL DATE: 5|3|

PLANNED RETRIEVAL TIME: 1010

ACTUAL RETRIEVAL TIME: /15 Z

TERRACON REPRESENTATIVE:

COMMENTS:



FOR INFORMATION CALL 563-355-0702

870 40th Avenue Bettendorf, Iowa 52722

Residence ID:	40	Address:	2417 5 4th St
Sample ID:	AA - 44	Location:	waterloo
Date:	5/2/11	Time:	1022
Sampler(s):	me lime	Summa Canister ID:	4497N
Flow Controller ID:	V339	Flow Controller Rate Setting (cc/min):	
Start Time:	1022 5/2	Finish Time:	1117 5/3
Pre-Sampling Vacuum (In Hg):	-30	Post-Sampling Vacuum (in Hg):	7,5
Organic Vapor Reading (ppm):	200 STATE ST	PID used:	
Summa Canister went to Ambient?	Yes / No	Method:	Grab
Comments:			
Sketch:	. 1	(1) (2) (2) (3) (3) (3) (4) (4) (4) (4) (4) (4) (4) (4) (4) (4	
	# # # # # # # # # # # # # # # # # # #		
			1/2
			W

DO NOT TOUCH

SAMPLE IN PROGRESS

TERRACON	PROJECT	NUMBER:	ofto for
----------	----------------	---------	----------

PROJECT LOCATION: WALNED

DATE INSTALLED: 5/2/201

TIME INSTALLED: 1522

ADDRESS INSTALLED: 2917 5 44 ST

SAMPLE ID: AAAL

SAMPLE LOCATION: tree in backyourd . Words of house

DEVICE #: 44971 CONTROLLER#: 1234

LAB ID #:

RETRIEVAL DATE: 5/3/201

PLANNED RETRIEVAL TIME: WZ

ACTUAL RETRIEVAL TIME:

TERRACON REPRESENTATIVE:

COMMENTS:



FOR INFORMATION CALL 563-355-0702

870 40th Avenue Bettendorf, lowa 52722 Name of Resident

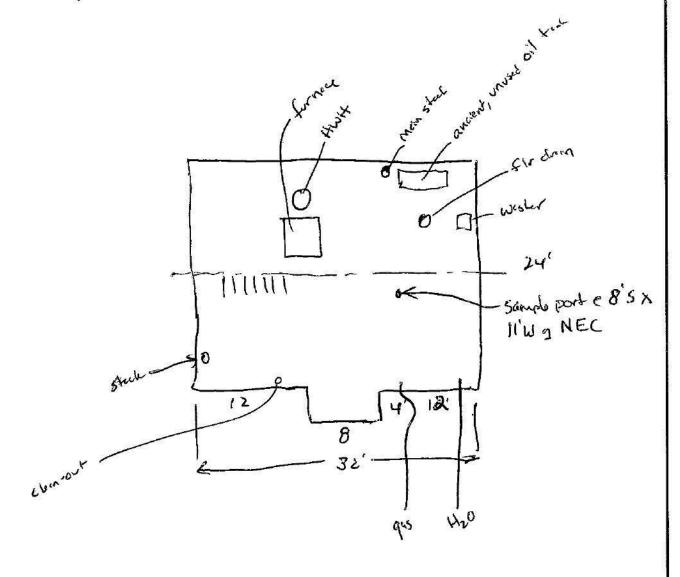
Date o	of Visit: 51월 201
Time	of Arrival: 1000 Time of Departure: 1150
Name	s of Terracon Representatives: Andaway
	xustra enwell
	Introduce Terracon Representatives and Show Terracon Identification
	Verify identity of resident; confirm authority to allow entry
X	Explain purpose of visit (check as appropriate):
	Sample Port Installation Sub-Slap Vapor Sampling
	Completion of Questionnaire Indoor Air Sampling Canister Installation
	Indoor Air Sampling Canister Outdoor Air Sampling Removal
	Other [Explain:]
<u> </u>	Explain if follow-up visits will occur and verify date/time of follow-up visits as appropriate.
	Date of Follow-Up Visit:
	Time of Follow-Up Visit:
Items	Completed as Noted:
du	ush M. Clancez
Terrac	con/Representative Signature
V	}

Residence ID:	46	Address:	2417 E 4th 87
Sample ID:	SS-46	Location:	Waterlow
Date:	5/3/201	Time:	1000
Sampler(s):	mc/jme	Summa Canister ID:	93046
Flow Controller ID:	191	Flow Controller Rate Setting (cc/min):	
Start Time:	1059	Finish Time:	FULL
Pre-Sampling Vacuum (in Hg):	-29	Post-Sampling Vacuum (in Hg):	-2
Organic Vapor Reading (ppm):	ssion	PID used:	3 3 43
Summa Canister went to Ambient?	Yes / No	Method:	Grab
500.00			
Sketch:			22
8			
×		3 3 3	
¥		3 3 3	
8		₹	
¥			

7[erracon

PROJECT:	Section 2 (1997)	Page	of
TO ACCUSE THE CON	 TELONA	574754V 50	

2417 E. 44 ST.



Wester press to fir drain

N->



Date o	of Visit: 4-26-11	
Time (of Arrival: 10\30 T	me of Departure:
Names	s of Terracon Representatives:	Jasta Enwell Neck Anderson
824	7	Nak Andors
$\sqrt{}$	Introduce Terracon Representative	and Show Terracon Identification
<u>√</u>	Verify identity of resident; confirm	authority to allow entry
<u>/</u>	Explain purpose of visit (check as	ppropriate):
	Sample Port Installation	Sub-Slap Vapor Sampling
	_ ✓ Completion of Questionnaire	Indoor Air Sampling Canister Installation
	Indoor Air Sampling Canist Removal	Outdoor Air Sampling
t	Other [Explain:]
<u> </u>	appropriate.	ur and verify date/time of follow-up visits as
	Date of Follow-Up Visit: 4/2	18/11
	Time of Follow-Up Visit:	
Items (Completed as Noted:	
	Justin Enmil	
Terrac	con Representative Signature	
Reside	ent Signature	



Street Address: 2421 E. 45 57.

Name of Resident:

Date and Time of Visit: 4-26-11 / 10:30

Sampling Port Installation Checklist

Work with resident to identify mutually agreeable area to install port in lowest occupied level of home.	
Precautions to be taken to protect floor coverings, if applicable:	3 0
Install sampling port in accordance with work plan procedures. Clean up any debris. Invite homeowner to view installed port and explain necessary precautions to prevent disturbance of it while it cures.	70
Items Completed as Noted:	
Terracon Representative Signature Resident Signature	

-6-



Arrival Checklist

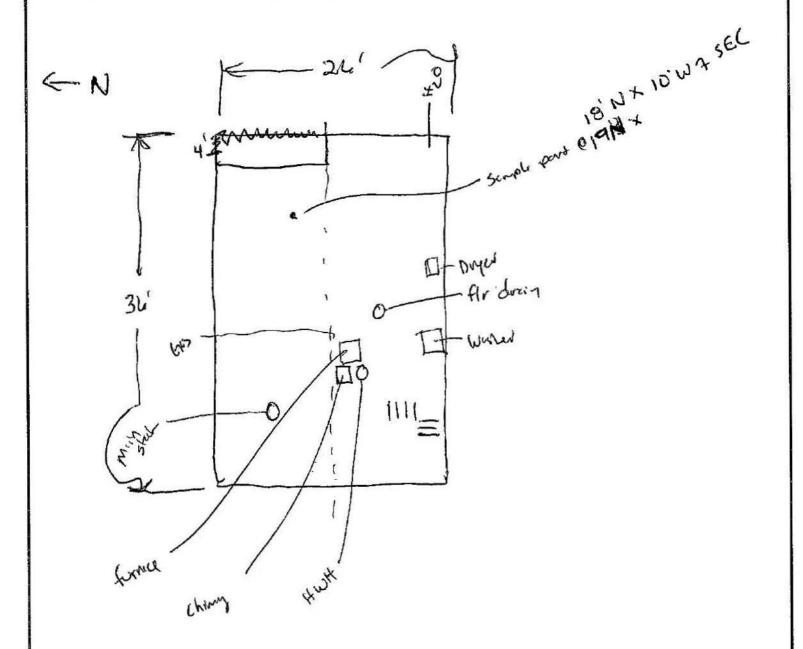
Date of Visit: 4/26/11				
Time of Arrival: Time of Departure:				
Names of Terracon Representatives:				
Names of Terracon Representatives: Justin Enwall Rob Bergman				
Introduce Terracon Representatives and Show Terracon Identification				
Verify identity of resident; confirm authority to allow entry				
Explain purpose of visit (check as appropriate):				
Sample Port Installation Sub-Slap Vapor Sampling				
Completion of Questionnaire Indoor Air Sampling Canister Installation				
Indoor Air Sampling Canister Outdoor Air Sampling Removal				
Other [Explain:				
Explain if follow-up visits will occur and verify date/time of follow-up visits as appropriate.				
Date of Follow-Up Visit:				
Time of Follow-Up Visit:				
Items Completed as Noted:				
Meller				
Terracon Representative Signature				
Resident Signature				

-5-

Residence ID:	47	Address:	2421 E 4th 5+
Sample ID:	55 - 47	Location:	Waterles, tara
Date:	4/28/11	Time:	800
Sampler(s):	JME/RPB	Summa Canister ID:	1320N
Flow Controller ID:	26	Flow Controller Rate Setting (cc/min):	200 celonin
Start Time:	818	Finish Time:	900
Pre-Sampling Vacuum (in Hg):	-30	Post-Sampling Vacuum (in Hg):	-7
Organic Vapor Reading (ppm):	21 0.2	PID used:	WEL MinuMac 3000 # with a 106 eVland
Summa Canister went to Ambient?	Yes / No	Method:	Grab
	from to Asu conto	ller	•
		59.	12
Sketch:			
Sketch:		8	
Sketch:		*	
Sketch:		8.	

				racon
PROJECT:			Page	of
JOB NO.	Date 4-26-11	Comp. By JE/MA	CHECKED BY:	

2421 E 4th ST. - Owner said drill any where





Terracon

Street Address: 2427 E. 45 ST. W 600

Name of Resident:

Date o	f Visit: 4-25-11
Time o	of Arrival: 1:30 p. Time of Departure: 14:40
Names	of Terracon Representatives: Mark Anclesson
	Justin Enwall
×	Introduce Terracon Representatives and Show Terracon Identification
汝	Verify identity of resident; confirm authority to allow entry
a a oo g	Explain purpose of visit (check as appropriate):
	Sample Port Installation Sub-Slap Vapor Sampling
	Z Completion of Questionnaire Indoor Air Sampling Canister Installation
	Indoor Air Sampling Canister Outdoor Air Sampling Removal
	Other [Explain:]
不	Explain if follow-up visits will occur and verify date/time of follow-up visits as appropriate.
	Date of Follow-Up Visit: Thurs 4/28 from 11:30-1
	Time of Follow-Up Visit:
Items (Completed as Noted:
Me Terrac	on Representative Signature



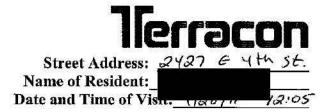
Sampling Port Installation Checklist

<u>X</u>	Work with resident to identify mutually agreeable area to install port in lowest occupied level of home.					
Precautions to be taken to protect floor coverings, if applicable:						
						
						
37						
7	Install sampling port in accordance with work plan procedures.					
X	Clean up any debris.					
X_	Invite homeowner to view installed port and explain necessary precautions to prevent disturbance of it while it cures.					
Items	Completed as Noted:					
1476	ink Anderson con Representative Signature					
	oner result					



Name of Resident:

Date o	of Visit:	4/24/11			
Time	of Arrival:	1205			:_12:25
Name	s of Terrac	on Representativ	es: Justin	Enual 2	(
			RS E	Evynni	×
Ļ	Introduce '	Ferracon Represe	ntatives and Sh	ow Terrac	con Identification
V,	Verify idea	ntity of resident; o	confirm authori	ty to allow	v entry
	Explain pu	rpose of visit (ch	eck as appropri	ate):	
	Sam	ple Port Installati	on	· · · · · · · · · · · · · · · · · · ·	Sub-Slap Vapor Sampling
	Con	pletion of Questi	onnaire		Indoor Air Sampling Canister Installation
	2	oor Air Sampling noval	Canister		Outdoor Air Sampling
	Oth	er [Explain:			
_5/	Explain if appropriate		vill occur and v	erify date	time of follow-up visits as
	Date of Fo	llow-Up Visit: _	4/29/11	<u>₩</u> . ₩	
	Time of Fo	ollow-Up Visit:	17:00	<u>5</u> 5	
Items	Completed	as Noted:			
(Motor	Ell			
Terrac	on Represe	ntative Signature		 :	
			₩		
		100			



Indoor Air Sampling Canister Installation Checklist

V v	erify that heating/cooling system he d windows have only been opened	as been operating for at lea l incidentally.	st 24 hours and tha	at doors	
	Work with homeowner to identify an unobtrusive spot for canister to be placed consistent with work plan requirements.				
1	xplain precautions to be taken whi		samples.		
V A	rrange for visit to remove canister:				
	ate: 4/2a/11				
'Ti	me:				
121		TA-48-MF			
1218	29.5 in Hg 29.0 in Hg	ZA-48-B	1495	K 406	
1218	29.0 in Hg	ZA-48-B-0	11157	K 406 K 362	

Items Completed as Noted:

Terracon Representative Signature

Residence ID:	48	Address:	2427 E 4th
Sample ID:	IA-48-B	Location:	2427 E 4th. Waterloo, IA
Date:	4/28/11	Time:	12:05
Sampler(s):	RPB/TME	Summa Canister ID:	1495
Flow Controller ID:	K406	Flow Controller Rate Setting (cc/min):	ayhr.
Start Time:	12:18 4/26/11	Finish Time:	1522 4/29/11
Pre-Sampling Vacuum (in Hg):	29.5 in Hg	Post-Sampling Vacuum (in Hg):	- 5
Organic Vapor Reading (ppm):	-	PID used:	No
Summa Canister went to Ambient?	Yes / No	Method:	Grab
Comments:	Placed consister on	bench about c	hest high in
2000	center of room		v
2882		200	Y
2882			,
282		200	THE SECOND SECON
7887			*
2882			*
Sketch:		210	
2887		210	
2887		210	

Residence ID:	48	Address:	2427 E 441
Sample ID:	IA-48-B-D	Location:	Westerloo, IA
Date:	4/28/11	Time:	12:05
Sampler(s):	RPB/JME	Summa Canister ID:	11157
Flow Controller ID:	K362	Flow Controller Rate Setting (cc/min):	24 hr.
Start Time:	12:18 4/28/11	Finish Time:	1572 4/2011
Pre-Sampling Vacuum (in Hg):	29.0 in Hg	Post-Sampling Vacuum (in Hg):	-3
Organic Vapor Reading (ppm):		PID used:	No
Summa Canister went to Ambient?	Yes / No	Method:	Grab
Comments:	Placed canister on center of room.	bench about ch	est high in
Sketch:	— L	ere:	- 100 M
		•	
		•	

DO NOT TOUCH

SAMPLE IN PROGRESS

TERRACON PROJECT NUMBER:	07107020
--------------------------	----------

PROJECT LOCATION: Water to IA

DATE INSTALLED: 4128101

TIME INSTALLED: 1218

ADDRESS INSTALLED: 2427 E 44 5+

SAMPLE ID: TA-48-13

SAMPLE LOCATION: center of bosement approximately

3 1/2 Habora grand

DEVICE #: 14435 CONTROLLER#: 1/406

LAB ID #:

RETRIEVAL DATE: 4/12/11

PLANNED RETRIEVAL TIME: /2:00

ACTUAL RETRIEVAL TIME: 1572-7-

TERRACON REPRESENTATIVE: TMEIRICE

COMMENTS:



FOR INFORMATION CALL 563-355-0702

870 40th Avenue Bettendorf, Iowa 52722

Residence ID:	48	Address:	2427 E 44 st
Sample ID:	IA-48-4F	Location:	Waterloo, IA
Date:	4/28/11	Time:	12:05
Sampler(s):	RPB/JME	Summa Canister ID:	0120
Flow Controller ID:	K 270	Flow Controller Rate Setting (cc/min):	24 hr.
Start Time:	12:13	Finish Time:	15:25
Pre-Sampling Vacuum (in Hg):	29.25 in Hg	Post-Sampling Vacuum (in Hg):	-5
Organic Vapor Reading (ppm):	_	PID used:	No
Summa Canister went to Ambient?	Yes / No	Method:	Grab
Comments:	Placed canister or + dining room alor	bookshelf sepe	reating living room
	a chining room alor	y N wall.	
Sketch:	a aining room alor	y / Wall.	
Sketch:	a aining room alon	y N Wall.	428
Sketch:	a crining room alor	y / Wall.	21.000
Sketch:	a aining room alon	y / Wall.	
Sketch:	a ching room alor	y / Wall.	
Sketch:	a crining room alor		
Sketch:	a ching room alor		31 -
Sketch:	a aining room alor		

DO NOT TOUCH

SAMPLE IN PROGRESS

TERRACON PROJEC	TNUMBER; 07107070
PROJECT LOCATION	1: Waterles, NN
DATE INSTALLED:	4/29/11
TIME INSTALLED:	
ADDRESS INSTALLE	D: 2427 414 Strest
SAMPLE ID: IA-4	18-MF
SAMPLE LOCATION:	
bushase in costar of	
DEVICE #: OIZO	CONTROLLER#: J 17270
LAB ID #:	
RETRIEVAL DATE:_	4/29/11
PLANNED RETRIEVA	AL TIME:
ACTUAL RETRIEVAL	TIME: <u>/57.5</u>
TERRACON REPRES	ENTATIVE: JUE/RPB
	₽

COMMENTS:



FOR INFORMATION CALL 563-355-0702

870 40th Avenue Bettendorf, Iowa 52722



Street Address: 2427 & 4th st
Name of Resident:

Date of	f Visit: 4/29/2011	
Time o	of Arrival: <u>1</u> 05	Time of Departure: 1530
Names	of Terracon Representatives:	Jen claucus
		justin enwall
×	Introduce Terracon Representativ	es and Show Terracon Identification
\overline{X}	Verify identity of resident; confir	m authority to allow entry
\overline{X}	Explain purpose of visit (check as	appropriate):
	Sample Port Installation	Sub-Slap Vapor Sampling
	Completion of Questionnai	re Indoor Air Sampling Canister Installation
	X Indoor Air Sampling Canis Removal ◀૱	ster Outdoor Air Sampling
	Other [Explain:	
-	Explain if follow-up visits will ocappropriate.	cur and verify date/time of follow-up visits as
	Date of Follow-Up Visit:	
	Time of Follow-Up Visit:	
Items (Completed as Noted:	
	nunfi MClanay	
Terfac	on Representative Signature	
		\$ \$100 000 000

Date: 4 20 2011 Time: 180S Sampler(s): 5mc/yml Summa Canister ID: 1013 Flow Controller ID: 138 Flow Controller Rate Setting (cc/mln): 1215 Start Time: 1215 Finish Time: 1250 Pre-Sampling Vacuum (in Hg): 72.5 Organic Vapor Reading (ppm): 8:0.2 ppm S:0.2 ppm S:0.2 ppm S:0.2 ppm Method: Grab Comments:	Residence ID:	48	Address:	2427 E 4th ST
Sampler(s): Small Melling Summa Canister ID: 138 Flow Controller ID: 138 Flow Controller Rate Setting (cc/min): Start Time: 1215 Finish Time: 1250 Post-Sampling Vacuum (in Hg): 2-5 Organic Vapor Reading (ppm): Start Time: 1250 Post-Sampling Vacuum (in Hg): 7-2.5 Post-Sampling Vacuum (in Hg): 7-3.5 Post-Sampling Vacuum (in Hg): 7-3.5 Method: Grab Comments:	Sample ID:	SS - 48	Location:	2427 E 4th 67 Worlevloo
Flow Controller ID: 138 Flow Controller Rate Setting (cc/min): Start Time: 1215 Finish Time: 1250 Pre-Sampling Vacuum (in Hg): -2.5 Organic Vapor Reading (ppm): S'.0.2 ppm PID used: Win PTE 3000 Summa Canister went to Ambient? Yes / No Method: Grab	Date:	4/24/2011	Time:	12 0S
Start Time: 1215 Finish Time: 1250	Sampler(s):	zmelime	Summa Canister ID:	1013
Pre-Sampling Vacuum (in Hg): Organic Vapor Reading (ppm): Summa Canister went to Ambient? Post-Sampling Vacuum (in Hg): PID used: PID used: Method: Grab Comments:	Flow Controller ID:	138		
Vacuum (in Hg): Organic Vapor Reading (ppm): Summa Canister went to Ambient? Vacuum (in Hg): Vacuum (in Hg): PID used: Wini VAC 3000 Method: Grab Comments:	Start Time:	1215	Finish Time:	1250
Summa Canister went to Ambient? Comments: Summa Canister Yes / No Method: Grab		5057		-2.5
Summa Canister went to Ambient? Comments: Summa Canister Yes / No Method: Grab		ss:0.2 ppm	PID used:	mini PAE 3000
			Method:	Grab
	Sketch:			200 Aug
			<u> </u>	

76,,,,,
PROJECT: Chambolain Manufactury Corporation Page 1 of 1 JOB NO. 07107020 Date 4-25-11 Comp. By JE / MA CHECKED BY:
2427 E. 445 ST., Waterloo, EA 24" (N-5) × 32 → 40'
- Sampling point @ 9'W X 10'N of SEC - ancient/damaged painted concrete CIV - 018 (Epaper) (previously installed Sampling ptg 0 2'N, X 10'E of SWC E 2'S X 10'W of NEC
Stack 32' Change of Stab owner thought old ancient furnace base thereby this 8 x 12' data the is sunten to the next of box than next of box fir.
N -> - a facetion dollad/sampled concrete slab only ~ 1-2" thick.
a lacetus dollad Sampled concrete slay only a 1-2



Street Address: 2600 E 45 ST.
Name of Resident:

Date of Visit: 4-25-11				
Time of Arrival: 3:30 p. Time of Departure: 4:25				
Names of Terracon Representatives: Mark Andurson				
Justin Edwall				
Introduce Terracon Representatives and Show Terracon Identification				
Verify identity of resident; confirm authority to allow entry				
Explain purpose of visit (check as appropriate):				
Sample Port Installation Sub-Slap Vapor Sampling				
Completion of Questionnaire Indoor Air Sampling Canister Installation				
Indoor Air Sampling Canister Outdoor Air Sampling Removal				
Other [Explain:				
Explain if follow-up visits will occur and verify date/time of follow-up visits as appropriate.				
Date of Follow-Up Visit: 4-28-11 (th).				
Time of Follow-Up Visit: 10:00, Brother = Andrew				
Items Completed as Noted:				
Mark Anderson				
Terracon Representative Signature				
Tottacon acoteschaatve Signature				



Name of Resident:

Date and Time of Visit: 4-25-11 e 3:30-p

Sampling Port Installation Checklist

X	Work with resident to identify mutually agreeable area to install port in lowest occupied level of home.
Precar	utions to be taken to protect floor coverings, if applicable:
£	State of the state
S (1190) 10.	
a -	
7	Install sampling port in accordance with work plan procedures.
<u>X</u>	Clean up any debris.
*	Invite homeowner to view installed port and explain necessary precautions to prevent disturbance of it while it cures.
Items	Completed as Noted:
۸۸	
Terra	con Representative Signature
)—()—()	γ

Street Address: Z600 E 4 th Street
Name of Resident:

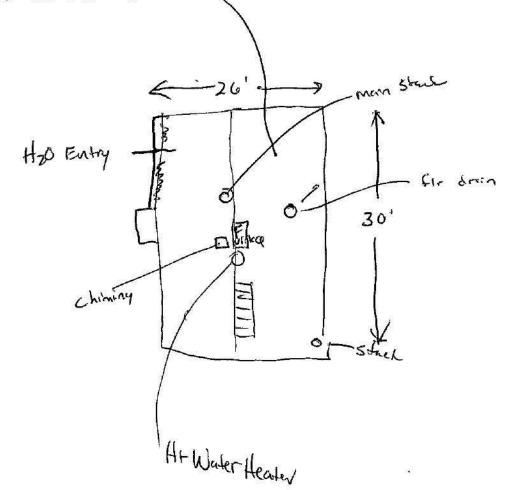
Date of Visit	: <u>4/28/11</u>	
Time of Arri	0	Time of Departure: 100
Names of Te	rracon Representatives:	Justin Enuz 11
	•	Rob Beginan
		tives and Show Terracon Identification
✓ Verify	videntity of resident; conf	firm authority to allow entry
<u> </u>	in purpose of visit (check	as appropriate):
	Sample Port Installation	Sub-Slap Vapor Sampling
8 	Completion of Questionn	Indoor Air Sampling Canister Installation
17	Indoor Air Sampling Car Removal	nister Outdoor Air Sampling
ŧ 	Other [Explain:	
4	in if follow-up visits will opriate.	occur and verify date/time of follow-up visits as
Date of	of Follow-Up Visit:	
Time	of Follow-Up Visit:	
	eted as Noted:	
Que.	Stull	
	presentative Signature	
	5.80	
Resident Sign	ature	

Residence ID:	56	Address:	Z600 4th Stree
Sample ID:	55-56	Location:	Westerlas, IA
Date:	4/28/11	Time:	1005
Sampler(s):	JAE / RPB	Summa Canister ID:	6349
Flow Controller ID:	142	Flow Controller Rate Setting (cc/min):	Zoo celuin
Start Time:	1013	Finish Time:	1057
Pre-Sampling Vacuum (in Hg):	28.5 in Ha	Post-Sampling Vacuum (in Hg):	1.0 -1.75 in Mg
Organic Vapor Reading (ppm):	21 (0.4)	PID used:	miniAso Boso #Z will
Summa Canister went to Ambient?	Yes / No	Method:	Grab
Comments:	pugal Zeo CC +	Pour SSMP with	1 syringe and
	puguel Zero CC + -lock from flo and to stop drawing	on contaller bas	remont ambient 0,6 mon
Sketch: — Gpp C		2 . 9	Mg, Shipped sample
	See Octaile	Shetch	

PROJECT:	Chamil	lain Manufactur	my Engloyedish	Page1	of 3
IOD NO	07107020	D-1- 4-15-0	Comp D. TF (MA	OLIEOKED DV	

- 2600 E. 4th ST., W'loo - pt. 9' W x 8' S & NEC _

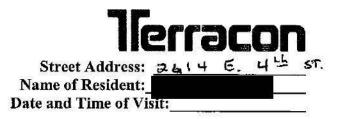
- printed concrete basement for.





Street Address: 2614 E. 445 ST.
Name of Resident:

Date of Visit: $U-26-11$
Time of Arrival: 8:30 Time of Departure: 9:70
Names of Terracon Representatives: <u>Justin Enwall</u>
Mark Anderson
Introduce Terracon Representatives and Show Terracon Identification
Verify identity of resident; confirm authority to allow entry
Explain purpose of visit (check as appropriate):
Sample Port Installation Sub-Slap Vapor Sampling
∑ Completion of Questionnaire Indoor Air Sampling Canister Installation
Indoor Air Sampling Canister Outdoor Air Sampling Removal
Other [Explain:]
Explain if follow-up visits will occur and verify date/time of follow-up visits as appropriate.
Date of Follow-Up Visit: 4-28-11 (Thurs)
Time of Follow-Up Visit:
tems Completed as Noted:
Mark Anderson
Terracon Representative Signature
Sesigent Sparature



Sampling Port Installation Checklist

X	Work with resident to identify mutually agreeable area to install port in lowest occupied level of home.
Precar	utions to be taken to protect floor coverings, if applicable:
g.	
~	Toolell governing most in goognedom or with sweet when we advance
_ <u></u>	Install sampling port in accordance with work plan procedures.
_X	Clean up any debris.
<u> </u>	Invite homeowner to view installed port and explain necessary precautions to prevent disturbance of it while it cures.
Items	Completed as Noted:
M	arl Anderson
Тетта	con Representative Signature
Resid	en Signature



Arrival Checklist

Date of	f Visit: 4/28/11
Time o	f Arrival: 1105 Time of Departure: 1700
Names	of Terracon Representatives: Justin Enwall Rob Bergman
	Rob Begunan
$\frac{}{}$	Introduce Terracon Representatives and Show Terracon Identification
4	Verify identity of resident; confirm authority to allow entry
<u>/</u>	Explain purpose of visit (check as appropriate):
	Sample Port Installation Sub-Slap Vapor Sampling
	Completion of Questionnaire Indoor Air Sampling Canister Installation
	Indoor Air Sampling Canister Outdoor Air Sampling Removal
	Other [Explain:
	Explain if follow-up visits will occur and verify date/time of follow-up visits as appropriate.
	Date of Follow-Up Visit:
	Time of Follow-Up Visit:
Items C	Completed as Noted:
	Jand Cllu
Terraco	on Representative Signature
Reside	nt Signature

-5-

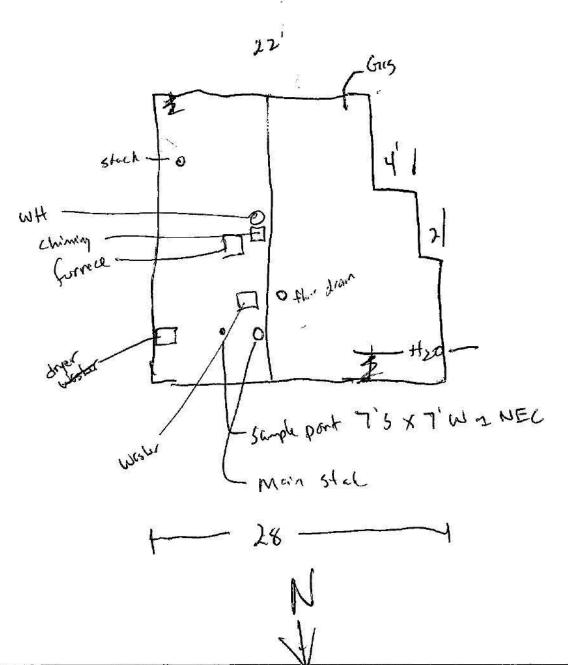
Residence ID:	60	Address:	2814 E 4145+
Sample ID:	55-60	Location:	Watula , TA
Date:	4/26/11	Time:	1105
Sampler(s):	JME IRPB	Summa Canister ID:	93219
Flow Controller ID:	82	Flow Controller Rate Setting (cc/min):	200 Colorin
Start Time:	1115	Finish Time:	1162
Pre-Sampling Vacuum (In Hg):	-27,5 in ly	Post-Sampling Vacuum (in Hg):	-1
Organic Vapor Reading (ppm):	41 O.1 ppm	PID used:	WBL minulac 3000 HZ with 10.6 cV lamp
Summa Canister went to Ambient?	Yes / No	Method:	Grab
Comments:	punged 200 CL for 5500	o with suringe	and a loce from
	Abucartally with sy	ringe, ambierth	and a lock from
Sketch:	Seo Detaild St	te tel	

Jerracon

PROJECT:	Page	of
JOB NO. 07107020 Date 4-26-11 Comp. By JE/MA	_ CHECKED BY:	

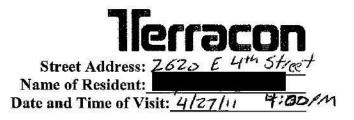
2614 E. 44 ST., W'100, 8:30

* Need Dan X





Date of Visit: $\frac{4/27/11}{1100}$	
Time of Arrival: 1668 Time of Departure:	
Names of Terracon Representatives: Justin Enwall Mark Anderson	
Mark Anderson	
Introduce Terracon Representatives and Show Terracon Identification	
Verify identity of resident; confirm authority to allow entry	
Explain purpose of visit (check as appropriate):	
Sample Port Installation Sub-Slap Vapor Sampling	
Completion of Questionnaire Indoor Air Sampling Canister Installation	ŗ
Indoor Air Sampling Canister Outdoor Air Sampling Removal	
Other [Explain:]	
Explain if follow-up visits will occur and verify date/time of follow-up visits as appropriate.	
Date of Follow-Up Visit: 5/2/11	
Time of Follow-Up Visit: 3:30 PM	
Items Completed as Noted:	
and the	
Terracon Representative Signature	



Sampling Port Installation Checklist

Work with resident to identify mutually agreeable area to install port in lowest occupied level of home.
Precautions to be taken to protect floor coverings, if applicable:
Install sampling port in accordance with work plan procedures.
Clean up any debris.
Invite homeowner to view installed port and explain necessary precautions to prevent disturbance of it while it cures.
Items Completed as Noted:
Quet Carell
Terracon Representative Signature
Resident Signature\

-6-



Visit: 5/2/2M	
f Arrival: <u>\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\</u>	Departure: 1040
of Terracon Representatives: XACO	incey
- xustr	n enwall
Introduce Terracon Representatives and SI	
Verify identity of resident; confirm author	ity to allow entry
Explain purpose of visit (check as appropr	iate):
Sample Port Installation	Sub-Slap Vapor Sampling
Completion of Questionnaire	Indoor Air Sampling Canister Installation
Indoor Air Sampling Canister Removal	Outdoor Air Sampling
Other [Explain:	
Explain if follow-up visits will occur and appropriate.	verify date/time of follow-up visits as
Date of Follow-Up Visit:	
Time of Follow-Up Visit:	
ompleted as Noted:	
nd Melarcus	
n Representative Signature	4
f C E E E E E	Arrival: SAS Time of Deficient Terracon Representatives: SAS Control Terracon Representatives and Single Port Installation Completion of Questionnaire Indoor Air Sampling Canister Removal Other [Explain: Sample Port Installation Completion of Questionnaire Removal Other [Explain: Sample Port Installation Completion of Questionnaire Removal Other [Explain: Sampling Canister Removal Completed Sample Port Installation Completed Sampling Canister Removal C

	le2	Address:	2420 E 4th St
Sample ID:	55-62	Location:	Waterloo
Date:	5/2/201	Time:	7595
Sampler(s):	me lime	Summa Canister ID:	04399
Flow Controller ID:	74	Flow Controller Rate Setting (cc/min):	A
Start Time:	GOW	Finish Time:	1434
Pre-Sampling Vacuum (in Hg):	-29	Post-Sampling Vacuum (in Hg):	-1.5
Organic Vapor Reading (ppm):	ambient. 0,0 SS: 0-0	PID used:	minilate 3000
Summa Canister went to Ambient?	Yes / No	Method:	TDAS Grab
Sketch:	27	ор	T op: port W=Hrs heate
Sketch:	27	ор	W=HU heats
Sketch:	N @	ор	W=HU heats
Sketch:	1.		W=Ha heat
Sketch:	imman		W=Ha heat
Sketch:	imman		W=Ha heat
Sketch:	imman		W=Ha heat
Sketch:	imman		W=Ha heat
Sketch:	imman		W=H20 heats F=freevace C=Chemony

Jlerracon

2620 E 45 ST.



Street Address: 2635 E 4thst Name of Resident:

Arrival Checklist

Date 6	of Visit: 4/28/2011
Time	of Arrival: \(\frac{30}{\delta}\) Time of Departure: \(\frac{21^0}{\delta}\)
Name	es of Terracon Representatives:
	Jen dancy
$\underline{\times}$	Introduce Terracon Representatives and Show Terracon Identification
\rightarrow	Verify identity of resident; confirm authority to allow entry
*	Explain purpose of visit (check as appropriate):
	Sample Port Installation Sub-Slap Vapor Sampling
	Completion of Questionnaire Indoor Air Sampling Canister Installation
	Indoor Air Sampling Canister Outdoor Air Sampling Removal
	Other [Explain:]
eq	Explain if follow-up visits will occur and verify date/time of follow-up visits as appropriate.
	Date of Follow-Up Visit: 5/3
	Time of Follow-Up Visit: _\O^O
Items	Completed as Noted:
Terryan	con Representative Signature
Resid	ent Signature

-5-



Name of Resident:

Date and Time of Visit: Alax 7011

Sampling Port Installation Checklist

X	Work with resident to identify mutually agreeable area to install port in lowest occupied level of home.
Precau	ations to be taken to protect floor coverings, if applicable:
9 	
	Install sampling port in accordance with work plan procedures.
\rightarrow	Clean up any debris.
X	Invite homeowner to view installed port and explain necessary precautions to prevent disturbance of it while it cures.
Items	Completed as Noted:
Terrac	on Replesentative Signature
Reside	ent Signature



Street Address: 2625 = 4th 5t Name of Resident:

Arrival Checklist

Date of Visit: 5 4 2011
Time of Arrival: \\ \lambda \text{OU} \\ \text{Time of Departure: \\ \frac{1315}{315} \\
Names of Terracon Representatives: Yan clancus
dank cliany
Introduce Terracon Representatives and Show Terracon Identification
Verify identity of resident; confirm authority to allow entry
Explain purpose of visit (check as appropriate):
Sample Port Installation Sub-Slap Vapor Sampling < ~~
Completion of Questionnaire Indoor Air Sampling Canister Installation
Indoor Air Sampling Canister Outdoor Air Sampling Removal
Other [Explain:]
Explain if follow-up visits will occur and verify date/time of follow-up visits as appropriate.
Date of Follow-Up Visit:
Time of Follow-Up Visit:
Items Completed as Noted:
Items Completed as Noted: Warts Wards Terracon Representative Signature
Terracon Representative Signature
Resident Signature

VAPOR INTRUSION CHARACTERIZATION WORK PLAN CHAMBERLAIN MANUFACTURING CORPORATION FORMER FACILITY AT 550 ESTHER STREET WATERLOO, IOWA

Soil Vapor/Indoor Air Sampling Information Form

Residence ID:	UT	Address:	21:35 E 4th St
Sample ID:	· SS-67	Location:	Waterlo
Date:	5/4/2011	Time:	1500
Sampler(s):	inc/dcc	Summa Canister ID:	7472
Flow Controller ID:	83	Flow Controller Rate Setting (cc/min):	
Start Time:	1227	Finish Time:	1305
Pre-Sampling Vacuum (in Hg):	-28.5	Post-Sampling Vacuum (in Hg):	- 3.5
Organic Vapor Reading (ppm):	ambient: 0.1 86:00	PID used:	miniPAE 3000
Summa Canister went to Ambient?	Yes / No	Method:	TO 15 Grab
Sketch:	(13'	<u> </u>	T-f0
	Figural WithOlkoter Cilhumpay Opiport Solution The state of the stat		

33 ×11

VAPOR INTRUSION CHARACTERIZATION WORK PLAN CHAMBERLAIN MANUFACTURING CORPORATION FORMER FACILITY AT 550 ESTHER STREET WATERLOO, IOWA

Soil Vapor/Indoor Air Sampling Information Form

Residence ID:	67	Address:	263S E 4th St
Sample ID:	SSD-67	Location:	water los
Date:	5/4/2011	Time:	1200
Sampler(s):	ime Idec	Summa Canister ID:	Whele 9
Flow Controller ID:	02	Flow Controller Rate Setting (cc/min):	Demonstration of the second
Start Time:	1227	Finish Time:	1365
Pre-Sampling Vacuum (in Hg):	2-30	Post-Sampling Vacuum (in Hg):	-4
Organic Vapor Reading (ppm):		PID used:	
Summa Canister went to Ambient?	Yes / No	Method:	TO-15 Grab
Comments:		1.772.00	2
	8		
Sketch:	<u> </u>	TI - 37627	52E
		8	



Name of Resident:

Arrival Checklist

Date o	f Visit: 4/28/201				
Time o	of Arrival: 3:3000 Time of Departure:				
Names	Names of Terracon Representatives: John Brunger				
	In Clanery				
X	Introduce Terracon Representatives and Show Terracon Identification				
\neq	Verify identity of resident; confirm authority to allow entry				
4	Explain purpose of visit (check as appropriate):				
2	Sample Port Installation Sub-Slap Vapor Sampling				
	Completion of Questionnaire Indoor Air Sampling Canister Installation				
	Indoor Air Sampling Canister Outdoor Air Sampling Removal				
	Other [Explain:]				
\times	Explain if follow-up visits will occur and verify date/time of follow-up visits as appropriate.				
	Date of Follow-Up Visit: 4/28 & 4/29				
	Time of Follow-Up Visit: Soo 250				
Items (Completed as Noted:				
Jen	n.L. Mlancy				
Terrac	on Representative Signature				
Reside	ent Signature				

-5-



Arrival Checklist

Date o	f Visit: 4 28 2011	
Time o	50 200 33 (0)	ne of Departure:
Names	s of Terracon Representatives:	In bruneyer Jun dancy
X	Introduce Terracon Representatives	and Show Terracon Identification
7	Verify identity of resident; confirm a	authority to allow entry
<u></u>	Explain purpose of visit (check as ap	propriate):
	Sample Port Installation	Sub-Slap Vapor Sampling
	Completion of Questionnaire	Indoor Air Sampling Canister Installation
	Indoor Air Sampling Canister Removal	Outdoor Air Sampling
	Other [Explain:	
<u> </u>	Explain if follow-up visits will occur appropriate.	and verify date/time of follow-up visits as
	Date of Follow-Up Visit:	No one home at a
	Time of Follow-Up Visit:	No one home at Time of arrival,
Items (Completed as Noted:	4158/11 Pmc
Terrac	on Representative Signature	
Reside	ent Signature	



Name of Resident:

Date and Time of Visit: 4125720 3:30000

Sampling Port Installation Checklist

\prec	Work with resident to identify mutually agreeable area to install port in lowest occupied level of home.
Precau	ations to be taken to protect floor coverings, if applicable:
<u>X</u>	Install sampling port in accordance with work plan procedures.
*	Clean up any debris.
4	Invite homeowner to view installed port and explain necessary precautions to prevent disturbance of it while it cures.
2	
Items	Completed as Noted:
Su	con Representative Signature
Prac	con representative righature
Reside	ent Signature



Appendix F

Photographs



Photo #1 322 East Arlington - Sample Port



Photo #2 322 East Arlington - General Area



Photo #3 401 East Arlington ID – Sample Port



Photo #4 401 East Arlington ID - General Area



Photo #5 211 Boston Avenue– Sample Port



Photo #6 211 Boston Avenue - General Area



Photo #7 216 Boston Avenue – Sample Port



Photo #8 216 Boston Avenue - General Area



Photo #9 223 Boston Avenue – Sample Port



Photo #10 223 Boston Avenue - General Area



Photo #11 227 Boston Avenue – Sample Port



Photo #12227 Boston Avenue - General Area



Photo #13 236 Boston Avenue – Sample Port



Photo #14236 Boston Avenue - General Area



Photo #15 239 Boston Avenue – Sample Port



Photo #16239 Boston Avenue - General Area



Photo #17 240 Boston Avenue – Sample Port



Photo #18 240 Boston Avenue - General Area



Photo #19 302 Boston Avenue – Sample Port



Photo #20 302 Boston Avenue - General Area



Photo #21 326 Boston Avenue – Sample Port



Photo #22 326 Boston Avenue - General Area



Photo #23 2221 East 4th - Sample Port



Photo #24 2221 East 4th - General Area



Photo #25 2227 East 4th - Sample Port



Photo #262227 East 4th - General Area



Photo #27 2233 East 4th – Sample Port



Photo #28 2233 East 4th - General Area



Photo #29 2237 East 4th – Sample Port



Photo #30 2237 East 4th - General Area



Photo #31 2413 East 4th - Sample Port



Photo #322413 East 4th - General Area



Photo #33 2417 East 4th - Sample Port



Photo #342417 East 4th - General Area



Photo #35 2421 East 4th – Sample Port



Photo #362421 East 4th - General Area



Photo #37 2427 East 4th - Sample Port



Photo #382427 East 4th - General Area



Photo #39 2600 East 4th - Sample Port



Photo #40 2600 East 4th - General Area



Photo #41 2614 East 4th – Sample Port



Photo #422614 East 4th - General Area



Photo #43 2620 East 4th - Sample Port



Photo #44 2620 East 4th - General Area



Photo #45 2635 East 4th - Sample Port



Photo #46 2635 East 4th - General Area



Photo #47 2646 East 4th - Sample Port



Photo #48 2646 East 4th - General Area



Photo #49 Collection of Sub-Slab sample



Photo #50 Sub-Slab duplicate sampling



Photo #51 Indoor Air sampling



Photo #52 Equipment Blank sampling



Appendix G Laboratory Analytical Results

12

B

4

F



THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc. TestAmerica Cedar Falls 704 Enterprise Drive Cedar Falls, IA 50613 Tel: 800-750-2401

TestAmerica Job ID: CUD1690

Client Project/Site: Chamberlain Vapor Sampling

Client Project Description: TO-15 Scans

For:

TERRACON - BETTENDORF 870 40th Avenue Bettendorf, IA 52722

Attn: John Brimeyer

Authorized for release by: 05/11/2011 03:01:30 PM

Brian C. Graettinger
Operations Manager
brian.graettinger@testamericainc.com

LINKS

Review your project results through
Total Access

Ask—The Expert

Visit us at: www.testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Case Narrative

Client: TERRACON - BETTENDORF Project/Site: Chamberlain Vapor Sampling TestAmerica Job ID: CUD1690

Job ID: CUD1690

Laboratory: TestAmerica Cedar Falls

Narrative

Analyzed by TestAmerica - Knoxville, TN.

2

3

4

E

Sample Summary

Client: TERRACON - BETTENDORF Project/Site: Chamberlain Vapor Sampling TestAmerica Job ID: CUD1690

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
CUD1690-01	SS-17	Air	04/28/11 11:45	04/28/11 18:00
CUD1690-02	SSD-17	Air	04/28/11 12:16	04/28/11 18:00
CUD1690-03	SS-22	Air	04/28/11 15:50	04/28/11 18:00
CUD1690-04	SS-13	Air	04/28/11 17:15	04/28/11 18:00

Client: TERRACON - BETTENDORF Project/Site: Chamberlain Vapor Sampling

Lab Sample ID: CUD1690-01 Client Sample ID: SS-17 Matrix: Air

Date Collected: 04/28/11 11:45 Date Received: 04/28/11 18:00

Method: EPA TO-15 - Air Sample Analysis - Subcontract Result Qualifier Analyte RL MDL Unit Analyzed Dil Fac D Analyst 0.10 Volatile Organic Compounds See BCG 05/04/11 00:00

mg

Attached Report.

Report.

Report

Report.

Client Sample ID: SSD-17 Lab Sample ID: CUD1690-02

Date Collected: 04/28/11 12:16

Date Received: 04/28/11 18:00

Method: EPA TO-15 - Air Sample Analysis - Subcontract Result Qualifier Analyte RL MDL Unit D Analyst Analyzed Dil Fac Volatile Organic Compounds See 0.10 05/04/11 00:00 mg 1.0 Attached

Client Sample ID: SS-22 Lab Sample ID: CUD1690-03 Date Collected: 04/28/11 15:50 Matrix: Air

Date Received: 04/28/11 18:00

Method: EPA TO-15 - Air Sample Analysis - Subcontract Result Qualifier RL Analyst Analyzed Dil Fac Volatile Organic Compounds See 0.10 mg BCG 05/04/11 00:00 1.0 Attached

Client Sample ID: SS-13

Date Received: 04/28/11 18:00

Lab Sample ID: CUD1690-04 Date Collected: 04/28/11 17:15 Matrix: Air

Method: EPA TO-15 - Air Sample Analysis - Subcontract

Result Qualifier Analyte RL MDL Unit D Analyst Analyzed Dil Fac Volatile Organic Compounds See 0.10 BCG 05/04/11 00:00 1.0 mg Attached

1.0

Matrix: Air



TestAmerica Laboratories, Inc.

ANALYTICAL REPORT

PROJECT NO. CUD1690

Terracon

Lot #: H1E030523

Brian Graettinger

TestAmerica Cedar Falls 704 Enterprise Drive Cedar Falls, IA 50613-0625

TESTAMERICA LABORATORIES, INC.

Jamie A. McKinney Project Manager

May 9, 2011

ANALYTICAL METHODS SUMMARY

H1E030523

PARAMET	ER	ANALYTICAL METHOD
Volatil	e Organics by TO15	EPA-2 TO-15
Referen	ces:	
EPA-2	"Compendium of Methods for the De Organic Compounds in Ambient Air"	

SAMPLE SUMMARY

H1E030523

WO # S	SAMPLE#	CLIENT SAMPLE ID	SAMPLED SAM DATE TIM
MHTR8	001	CUD1690-01	04/28/11 11:
MHTTF	002	CUD1690-02	04/28/11 12:
MHTTG	003	CUD1690-03	04/28/11 15:
MHTTJ	004	CUD1690-04	04/28/11 17:
			13,400,713,000

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter rest, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight,

PROJECT NARRATIVE H1E030523

The results reported herein are applicable to the samples submitted for analysis only. If you have any questions about this report, please call (865) 291-3000 to speak with the TestAmerica project manager listed on the cover page.

This report shall not be reproduced except in full, without the written approval of the laboratory.

The original chain of custody documentation is included with this report.

Sample Receipt

There were no problems with the condition of the samples received.

Quality Control and Data Interpretation

Unless otherwise noted, all holding times and QC criteria were met and the test results shown in this report meet all applicable NELAC requirements.

EPA methods TO-14A and TO-15 specify the use of humidified "zero air" as the blank reagent for canister cleaning, instrument calibration and sample analysis. Ultra-high purity humidified nitrogen from a cryogenic reservoir is used in place of "zero air" by TestAmerica Knoxville.

TestAmerica Knoxville maintains the following certifications, approvals and accreditations: Arkansas DEQ Lab #88-0688, California DHS ELAP Cert. #2423, Colorado DPHE, Connecticut DPH Lab #PH-0223, Florida DOH Lab #E87177, Georgia DNR Lab #906, Hawaii DOH, Illinois EPA Lab #200012, Indiana DOH Lab #C-TN-02, Iowa DNR Lab #375, Kansas DHE Cert. #E-10349, Kentucky DEP Lab #90101, Louisiana DEQ Cert. #03079, Louisiana DOHH, Maryland DOE Cert. #277, Michigan DEQ Lab #9933, Nevada DEP, New Jersey DEP Lab #1N001, New York DOH Lab #10781, North Carolina DPH Lab #21705, North Carolina DEHNR Cert. #64, Ohio EPA VAP Lab #CL0059, Oklahoma DEQ Lab #9415, Pennsylvania DEP Lab #68-00576, South Carolina DHEC Cert #84001001, Tennessee DOH Lab #02014, Texas CEQ, Utah DOH Lab # QUAN3, Virginia DGS Lab #00165, Washington DOE Lab #C1314, West Virginia DEP Cert. #345, West Virginia DHHR Cert #9955C, Wisconsin DNR Lab #998044300, Naval Facilities Engineering Service Center and USDA Soil Permit #S-46424. This list of approvals is subject to change and does not imply that laboratory certification is available for all parameters reported in this environmental sample data report.

Client Sample ID: CUD1690-01

GC/MS Volatiles

Lot-Sample # H1E030523 - 001			Work Order #	MHTR81AA	Mat	rix AIR	
Date Sampled: 04/28/2011 Prep Date: 05/04/2011 Prep Batch #: 1125185 Dilution Factor.: 1			Date Received: Analysis Time: Analysis Time: Method	05/03/2011 05/04/2011 19:49 TO-15			
		RESULTS (ppb(v/v))	REPORTING LIMIT (ppb(v/v))	MDL (ppb(v/v))	RESULTS (ug/m3)	REPORTING LIMIT (ug/m3)	MDL (ug/m3)
cis-1,2-Dichloroethene		ND	0.080	0.024	ND	0.32	0.095
1,1-Dichloroethene		ND	0.080	0.013	ND	0.32	0.052
Vinyl chloride		ND	0.080	0.029	ND	0.20	0.074
1,1-Dichloroethane		ND	0.080	0.010	ND	0.32	0.040
1,1,1-Trichloroethane		0.027 J	0.080	0.012	0.15 J	0.44	0.065
Trichloroethene		ND	0.040	0.014	ND	0.21	0.075
trans-1,2-Dichloroethen	e	ND	0.080	0.020	ND	0.32	0.079
tians-1,2-Dichioroethen		4,000		2000000			
Tetrachloroethene		0.16	0.080	0.016	1.1	0.54	0.11

PERCENT

99

RECOVERY

LABORATORY

CONTROL

LIMITS (%)

60 - 140

Qualifiers

SURROGATE

4-Bromofluorobenzene

Estimated result. Result is less than RL.

TELEO20500 001

Result (ug/m3) = Result (ppb(v/v))[unrounded] * (Molecular Weight/24.45)

 $Reporting \ Limit \ (ug/m3) = Reporting \ Limit \ (ppb(v/v))[uurounded] * (Wolecular \ Weight/24.45)$

MDL (ug/m3) = MDL (ppb(v/v))[unrounded] * (Molecular Weight/24.45)

Client Sample ID: CUD1690-02

GC/MS Volatiles

Lot-Sample #	H1E030523 - 002		Work Order#	MHTTFIAA	Mate	rix: AIR	
Date Sampled: 04/28/2011 Prep Date: 05/04/2011 Prep Batch #: 1125185 Dilution Factor.: 1			Date Received: Analysis Time: Analysis Time:	05/03/2011 05/04/2011 20:42 TO-15			
PARAMETER		RESULTS (ppb(v/v))	REPORTING LIMIT (ppb(v/v))	MDL (ppb(v/v))	RESULTS (ug/m3)	RBPORTING LIMIT (ug/m3)	MDL (ug/m3)
1,1,2-Trichloroethane		ND	0.080	0.021	ND	0.44	0.11
Tetrachloroethene		0.21	0.080	0.016	1,4	0.54	0.11
trans-1,2-Dichloroethe	ene	ND	0.080	0.020	ND	0.32	0.079
Trichloroethene		0.023 J	0.040	0.014	0.12 J	0.21	0.075
1,1,1-Trichloroethand	è	0.034 J	0.080	0.012	0.18 J	0.44	0.065
1,1-Dichloroethane		ND	0.080	0.010	ND	0.32	0.040
Vinyl chloride		ND	0.080	0.029	ND	0.20	0.074
1,1-Dichloroethene		ND	0.080	0.013	ND	0.32	0.052
cis-1,2-Dichloroethene	3	ND	0.080	0,024	ND	0.32	0.095
SURROGATE			PERCENT RECOVERY		CON	ORATORY ITROL ITS (%)	
4-Bromofluorobenzen	e		101		60 -	140	

Oualifiers

Estimated result. Result is less than RL.

 $Result \ (ug/m3) = Result \ (ppb(v/v))[unrounded] \ * \ (Molecular \ Weight/24.45)$

 $Reporting\ Limit\ (ug/m3) = Reporting\ Limit\ (ppb(v/v))[unrounded]\ ^*\ (Molecular\ Weight/24.45)$

 $\mathbf{MDL} \; (\mathbf{ug/m3}) = \mathbf{MDL} \; (\mathbf{ppb}(\mathbf{v/v})) | \mathbf{unrounded} | \; ^{\pm} \; (\mathbf{Molecular} \; \mathbf{Weight/24.45})$

TO-14 _rev5MDL_DOD.rpt version 5,002 02/07/2011

Client Sample ID: CUD1690-03

GC/MS Volatiles

Lot-Sample #	I1E030523 - 003		Work Order#	MHTTGIAA	Mat	rix AIR	
			Date Received: Analysis Time: Analysis Time: Method	05/03/2011 05/04/2011 21:34 TO-15			
		RESULTS (ppb(v/v))	REPORTING LIMIT (ppb(v/v)	MDL	RESULTS (ug/m3)	REPORTING LIMIT (ug/m3)	MDL (ug/m3)
cis-1,2-Dichloroethene		0.092	0.080	0.024	0,37	0.32	0.095
1,1-Dichloroethene		0.063 J	0.080	0.013	0.25 J	0.32	0.052
Vinyl chloride		ND	0.080	0.029	ND	0.20	0.074
1,1-Dichloroethane		0.095	0.080	0.010	0.38	0.32	0.040
1,1,1-Trichloroethane		0.55	0.080	0.012	3.0	0.44	0.065
Trichloroethene		4.6	0.040	0.014	25	0,21	0.075
frans-1,2-Dichloroethen	e	ND	0.080	0.020	ND	0.32	0.079
Tetrachloroethene		1.9	0.080	0.016	13	0.54	0.11
1,1,2-Trichloroethane		ND	0.080	0.021	ND	0.44	0.11
SURROGATE			PERCENT RECOVERY		CON	OORATORY ITROI. ITS (%)	
4-Bromofluorobenzene			104	-	60 -	140	-

Qualifiers

1 Estimated result. Result is less than RL.

 $Result \ (ug/m3) = Result \ (ppb(v/v))[unrounded] \ ^* \ (Molecular \ Weight/24.45)$

 $Reporting\ Limit\ (ug/m3) = Reporting\ Limit\ (ppb(v/v))[unrounded]\ *\ (Molecular\ Weight/24.45)$

MDL (ug/m3) = MDL (ppb(v/v))[unrounded] * (Molecular Weight/24,45)

TO-14 rev5MDL_DOD.rpt version 5.002 02/07/2011

Matrix..... AIR

Date Sampled ...: Prep Date:

Prep Batch #:

Dilution Factor.:

Lot-Sample #

04/28/2011 05/04/2011 1125185 L

H1E030523 - 004

Date Received ..: Analysis Time: Analysis Time....:

Work Order #

05/03/2011 05/04/2011 22:27

MHTTJIAA

Method....: TO-15

PARAMETER	RESULTS (ppb(v/v))	REPORTING LIMIT (ppb(v/v))	MDL (ppb(v/v))	RESULTS (ug/m3)	REPORTING LIMIT (ug/m3)	MDL (ug/m3)
1,1,2-Trichloroethane	ND	0.080	0.021	ND	0.44	0.11
Tetrachloroethene	0.25	0.080	0.016	1.7	0.54	0.11
trans-1,2-Dichloroethene	ND	0.080	0.020	ND	0.32	0.079
Trichloroethene	0.018 J	0.040	0.014	0.096 J	0.21	0.075
1,1,1-Trichloroethane	0.056 J	0.080	0.012	0.31 J	0.44	0,065
1,1-Dichloroethane	ND	0,080	0.010	ND	0.32	0.040
Vinyl chloride	ND	0.080	0.029	ND	0.20	0.074
1,1-Dichloroethene	ND	0.080	0.013	ND	0.32	0.052
cis-1,2-Dichloroethene	ND	0.080	0.024	ND	0.32	0.095

SURROGATE 4-Bromofluorobenzene PERCENT RECOVERY

101

LABORATORY CONTROL LIMITS (%)

60 - 140

Ounlifters

Estimated result. Result is less than RL.

Result (ug/m3) = Result (ppb(v/v))[unrounded] * (Molecular Weight/24.45)

Reporting Limit (ug/m3) = Reporting Limit (ppb(v/v))[uurounded] * (Molecular Weight/24,45)

MDL (ug/m3) = MDL (ppb(v/v))|unrounded| * (Molecular Weight/24.45)

TO-14 rev5MDL DOD.rpt version 5.002 02/07/2011

Client Sample ID: INTRA-LAB BLANK

GC/MS Volatiles

Lot-Sample # H1E050000 - 185B			Work Order#	MHXQT1AE	Mati	ix AIR	
Prep Date Prep Batch #: Dilution Factor.:	04/28/2011 05/04/2011 1125185		Date Received: Analysis Time; Analysis Time; Method:	05/03/2011 05/04/2011 13:33 TO-15			
PARAMETER		RESULTS (ppb(v/v))	REPORTING LIMIT (ppb(v/v)	MDL (ppb(v/v))	RESULTS (ug/m3)	REPORTING LIMIT (ug/m3)	MDL (ug/m3)
cis-1,2-Dichloroethene		ND	0,080	0.024	ND	0.32	0.095
, 1-Dichloroethene		ND	0.080	0.013	ND	0.32	0.052
Vinyl chloride		ND	0.080	0.029	ND	0.20	0.074
1,1-Dichloroethane		ND	0.080	0,010	ND	0.32	0.040
,1,1-Trichloroethane		ND	0.080	0.012	ND	0.44	0.065
Prichloroethene		ND	0.040	0.014	ND	0.21	0.075
rans-1,2-Dichloroethen	e	ND	0.080	0.020	ND	0.32	0.079
etrachloroethene		ND	0.080	0.016	ND	0.54	0.11
,1,2-Trichloroethane		ND	0.080	0,021	ND	0.44	0.11
SURROGATE			PERCENT RECOVERY		CON	ORATORY TROL TS (%)	
4-Bromofluorobenzene			1.00		60 -	140	

 $Result \ (ug/m3) = Result \ (ppb(v/v)) \{uurounded] \ ^* \ (Molecular \ Weight/24.45)$

 $Reporting\ Limit\ (ug/m3) = Reporting\ Limit\ (ppb(v/v))[unrounded]\ ^{\#}\ (Molecular\ Weight/24.45)$

 $MDL \ (ug/m3) = MDL \ (ppb(v/v)) [unrounded] * (Molecular \ Weight/24.45)$

Client Sample ID: CHECK SAMPLE

GC/MS Volatiles

Dilution Factor: 1			Work Order#	MHXQT1AF		Matrix:	AIR
		Date Received: Analysis Time: Analysis Time: Method: SPIKE MEASURED AMOUNT (ppb(v/v)) (ppb(v/v))		05/03/2011 05/04/2011 11:41 TO-15 SPIKE AMOUNT (ug/m3)	MEASURED AMOUNT (ug/m3)	PERCENT RECOVERY	RECOVERY LIMITS
1,1,2-Trichloroethane		5.00	5.52	27.3	30.1	110	70 - 130
rans-1,2-Dichloroethene		5.00	5.54	19.8	22.0	111	70 - 130
Tetrachloroethene		5,00	5.25	33.9	35.6	105	70 - 130
1,1,1-Trichloroethane		5.00	5.55	27.3	30.3	111	70 - 130
Trichloroethene		5,00	5,35	26,9	28,8	107	70 - 130
cis-1,2-Dichloroethene		5.00	5.51	19.8	21.8	110	70 - 130
,1-Dichloroethene		5,00	5.57	19.8	22.1	111	70 - 130
Vinyl chloride		5,00	5,33	12.8	13.6	107	70 - 130
,1-Dichloroethane		5.00	5.53	20.2	22.4	111	70 - 130
SURROGATE			PERCENT RECOVERY			LABORATORY CONTROL LIMITS (%)	
4-Bromofluorobenzene			102			60 - 140	

 $Result \ (ug/m3) \Rightarrow Result \ (ppb(v/v)) [unrounded] \ ^* \ (Molecular \ Weight/24.45)$

 $Reporting \ Limit \ (ug/m3) \approx Reporting \ Limit \ (ppb(v/v)) | unrounded| \ ^{\circ} \ (Molecular \ Weight/24.45)$

 $[\]mathbf{MDL} \; (\mathbf{ug/m3}) = \mathbf{MDL} \; (\mathbf{ppb}(\mathbf{v/v})) [\mathbf{uurounded}] \; * \; (\mathbf{Molecular} \; \mathbf{Weight/24.45})$

SUBCONTRACT ORDER TestAmerica Cedar Falls

CUD1690

SENDING LABORATORY:

TestAmerica Cedar Falls 704 Enterprise Drive Cedar Falls, IA 50613 Phone: 800-750-2401

Fax: 319-277-2425

Project Manager: Brian C. Graettinger

RECEIVING LABORATORY:

TestAmerica Knoxville 5815 Middlebrook Pike Knoxville, TN 37921 Phone: (865) 291-3000

Fax: -

Analysis	Company	Expires	Comments	
That you	200	Dapit va		
Sample ID: CUD1690-01 Air	Sampled: 04/28/11 11:45	Volume (in L):	6631	
simple to Course of the	DKINPIVOI 0 1/20/11 11/10	(in E).		
AIR - VOC Scan (TO-15)	05/09/11 12:00	07/27/11 11:45		
AIR - Summa Canister Rental	05/09/11 12:00	09/12/38 11:45		
AIR - Flow Controller Rental	05/09/11 12:00	02/09/85 11:45		
	Aii	Volume	700 x	
Sample ID: CUD1690-02 Air	Sampled: 04/28/11 12:16	(in L);	1536	
AIR - VOC Scan (TO-15)	05/09/11 12:00	07/27/11 12:16		
AIR - Summa Canister Rental	05/09/11 12:00	09/12/38 12:16		
AIR - Flow Controller Rental	05/09/11 12:00	02/09/85 12:16		
- 1-20 CHANNES (14)	Ali	Volume		
Sample ID: CUD1690-03 Air	Sampled: 04/28/11 15:50	(in L):	6578	
AIR - VOC Scan (TO-15)	05/09/11 12:00	07/27/11 15:50		
AIR - Summa Canister Rental	05/09/11 12:00	09/12/38 15:50		
AIR - Flow Controller Rental	05/09/11 12:00	02/09/85 15:50		
200	Air Air	Volume	(22.12.1)	
Sample ID: CUD1690-04 Air	Sampled: 04/28/11 17:15	(in L):	62342N	_
AIR - VOC Scan (TO-15)	05/09/11 12:00	07/27/11 17:15		
AIR - Summa Canister Rental	05/09/11 12:00	09/12/38 17:15		
AIR - Flow Controller Rental	05/09/11 12:00	02/09/85 17:15		

Released By

Date

Received By

Date

Page 1 of 1

TAL Knoxville

5815 Middlebrook Pike Knoxville, TN 37921 phone 865-291-3000 fax 865-584-4315

H1E030293 Canister Samples Chain of Custody Record

TestAmerica

TestAmerica assumes no liability with respect to the collection and shipment of these samples.

10011 111101100
· · · · · · · · · · · · · · · · · · ·
THE LEADER IN ENVIRONMENTAL TESTING

Client Contact Information	Proje	Project Manager: JOHN BRINEVER					Sampled By: fb mc						of COCs								
Company: TERRACON Address: S70 40th AVE City/State/Zip RETTEN DOVEF, IA 52722 Phone: GU3, 355, 0702	Site	Phone: 563,355.0702; jfbrimeyer@kuvo Site Contact: TAL Contact:				com		- 0 - 0						in notes section)	den!					ection)	
FAX: 563, 355, 4789 Project Name: CAMBERLAIN VAPOR SAMPLING	-	_	Amalanta	T	ad Time		-		1					(es s	es					tes s	
Site/location: WATERLOO, IA	-	0	Standard (St	Turnarou acifu)	na rime		-		UHIT					ln no	410.77					In no	
PO#		Rush (Specify)											1 1	ecify	19				. 1	BCITY	
Sample Identification		ample ate(s)		Time Stop	Canister Vacuum in Field, "Hg (Start)	Canister Vacuum in Field, 'Hg (Stop)	Flow Controller	Canister ID	TO-15 COW	TO-14A	EPA 3C	EPA 25C	ASTM D-1946	Other (Please specify	Sample Type	Indoor Air	Ambient Air	Soll Gas	Landfill Gas	Other (Please specify in notes section)	
88-17	4/2	18	1115	1145	-28,5	-4		iele3)	X						. 4						
SSD-17			1144	1214	-28	-3		1536	11												
SS-22			1508	1556	-30	3.8		6578	11	-7					1.0						
55:13	1	/	1437	1715	-28,5	-2.5		42342N	V						100						
	-	_													#) 1.1 13 1						
Sampled by:	-	Temperature (Fahrenhei					it)			1 Box Recompos @ Ambiens 200c											
jennifor clancey		Interior			Ambient			C	Custody sears intech												
Jennilon -		Start	72°F		4550 F			1	Fed Ex: 420827077057												
		Stop					h		4 Cans				4 Flows 3 OBA 5 3 H								
	-				Pressure (Inches of Hg)		1		-	_	_		00	B	45	3/1	1	_			
	-	Start	Interior		Ambient				-						-						
									+												
Special Instructions/QC Requirements & Comme Canisters Shipped by:	Date	Stop e/Time:				100	Received by:														
Samples Relinquished by Clausey Relinquished by: Relinquished by: Relinquished by:	Date	Date/Time: 4 28 20 1 1800 Date/Time: 4 28 4 18:52			Received	BOLOW	neif 5	10	win	5	5/3/11	105	3								











HI E030523

TestAmerica

702 Entrement DRINT + CEDAE FASSE 14: 30m/3 80t-75t-240 + 345-27 - 5425 LAZ

THE LEADER IN ENVIRONMENTAL TESTING

IH Sample Receipt Form

City: Better	dorf	Time (Delivered):(8:00
COC Completed Correct (Cite inconsistencies below) ample Checklist (Check indi	tly? X Yes No	Time (Delivered):
Received Broken	Information Missing	
Improper Media	Missing Sample	UPS TA Courier
Missing Label	Sample Past Hold Date	FedEx TA Field Services
Temperature	Extra Sample	DHL Client
COC Discrepancy	Insufficient Sample Volume	USPS Other
Other:		Spee-Dee
Reviewed By BCG-	Date 4/29/11	Samples Not Received in a Cooler Temperature Not Taken

PhO4 FolderiQ4 Forms & Loc Book ages/H Cooker Receipment.god

Review Items	Yes	No 1	NA H	f No, what was the problem?	Comments/Actions Taken
Do sample container labels match COC? (IDs, Dates, Times)	~			1a Do not match COC 1b Incomplete information 1c Marking smeared 1d Label torn 1e No label 1f COC not received 1g Other:	
 Is the cooler temperature within limits? (> freezi temp. of water to 6 °C, VOST: 10°C) 	ing	9		2a Temp Blank =	
 Were samples received with correct chemical preservative (excluding Encore)? 		,		3a Sample preservative =	
4. Were custody seals present/intact on cooler and/ containers?	or			4a Not present 4b Not intact 4c Other:	
5. Were all of the samples listed on the COC receiv	ved?			5a Samples received-not on COC 5b Samples not received-on COC	
Were all of the sample containers received intact	1?			6a Leaking — 6b Broken —	
7. Were VOA samples received without headspace	?	1	/ .0	7a Headspace (VOA only)	
8. Were samples received in appropriate containers	? /			8a Improper container	
Did you check for residual chlorine, if necessary	?	,		9a Could not be determined due	
10. Were samples received within holding time?	1		D	10a Holding time expired	
11. For rad samples, was sample activity info. provide	ded?	1		Incomplete information	
12. For 1613B water samples is pH<9?		1		no, was pH adjusted to pH 7 - 9	
13. Are the shipping containers intact?	~		100	13a Leaking — 13b Other: —	
14. Was COC relinquished? (Signed/Dated/Timed)	V			14a Not relinquished	
15. Are tests/parameters listed for each sample?	~			15a Incomplete information	
16. Is the matrix of the samples noted?	~		Ð	15a Incomplete information	
17. Is the date/time of sample collection noted?	~			15a Incomplete information	
18. Is the client and project name/# identified?	1		E	15a Incomplete information	
19. Was the sampler identified on the COC?					

Sample Receiving Associate:

Date: ≤ |3/4

QA026R22.doc, 012811





Test America - Knoxville ---- Air Canister Dilution Log Lot Number: <u>H1E030523</u>

			Initial Can Pressu	ire								Sut	sequent I	Dilutions	5			
Analyst/Date	Tedlar Bag Time	Pbarr (in)	Sample ID	Can#	100000000000000000000000000000000000000	Adj. Initial Pres. (- in or + psig)	Analyst/Date	1 / 5	Pbarr (in)	Initial Pres, Pi (in)	Final Pres. Pf (psig)	First InCan Final Pres. Pf (psig)	Second In-can Final Pres. Pf (psig)	Third InCan Final Pres. Pf (psig)	Serial Dilution Can#	Vol (mL)	Final Pres. Pf (psig)	Comments
DDF 5-3-11	NA	2896	MHTR8	6631	-3.7													9196
	1	1	MHTTF	1536	-3.3													+
			MHTTG	6578	-19													9173
6	0		MHTTJ	62342N	-2.4													9183

Certification Summary

Client: TERRACON - BETTENDORF Project/Site: Chamberlain Vapor Sampling TestAmerica Job ID: CUD1690

Laboratory	Authority	Program	EPA Region	Certification ID
TestAmerica Cedar Falls		AlHA		101044
TestAmerica Cedar Falls	Illinois	NELAC	5	200024
TestAmerica Cedar Falls	lowa	State Program	7	7
TestAmerica Cedar Falls	Kansas	NELAG	7	E-10341
TestAmerica Cedar Falls	Minnesota	NELAC	5	019-999-319
TestAmerica Cedar Falls	North Dakota	State Program	8	R-186
TestAmerica Cedar Falls	Oregon	NELAC	10	IA100001
TestAmerica Cedar Falls	Wisconsin	State Program	5	999917270

Accreditation may not be offered or required for all methods and analytes reported in this package. Please contact your project manager for the laboratory's current list of certified methods and analytes.

Qualifier Definition/Glossary

Glossary		
Abbreviation	These commonly used abbreviations may or may not be present in this report.	
n	Listed under the "D" column to designate that the result is reported on a dry weight basis.	
EPA	United States Environmental Protection Agency	
ND	Not Detected above the reporting level.	
MDL	Method Detection Limit	
RL	Reporting Limit	
RE, RE1 (etc.)	Indicates a Re-extraction or Reanalysis of the sample.	
%R	Percent Recovery	
RPD	Relative Percent Difference, a measure of the relative difference between two points.	

E

Б

Method Summary

Client: TERRACON - BETTENDORF Project/Site: Chamberlain Vapor Sampling TestAmerica Job ID: CUD1690

Method	Method Description	Protocoi	Laboratory
EPA TO-15	Air Sample Analysis - Subcontract		TAL CF

Protocol References:

Laboratory References:

TAL CF = TestAmerica Cedar Falls, 704 Enterprise Drive, Cedar Falls, IA 50613, TEL 800-750-2401

TAL Knoxville

5815 Middlebrook Pike Knoxville, TN 37921 phone 865-291-3000 fax 865-584-4315

Canister Samples Chain of Custody Record

TestAmerica

TestAmerica assumes no liability with respect to the collection and shipment of these samples.

	1 17		~
Service Service	11.10	the first institution in	Salta STRANTES

Client Contact Information	Pro	ject Ma	187 : 1886 18.285,61	IN BEI	HEYER		Sampled By: Ab June						of COCs							
Company: TERRACON	Ph	one: 50	70.228,61	oz; jfbi	imeyeres	ervacon.	(70												
Address: 870 40th AVE City/State/Zip BFTTEN DOPF, 1A 52722	- On	e Coma	LL.			com				TV					las V					
City/State/Zip BETTEN DOVEF, IA 52722	TA	L Conta	ct:											(va					Ē	
Phone: 563, 355, 0702 FAX: 563, 355, 4789	-	_							7					ection					in City	
Project Name: (Name) 4111			Anaboda	Torrestore	- d Winne	_			1					notes section)					notes section)	
Project Name: CHMBERLAIN VAPOR SAMPLIN	0	0	Analysis Turnaround Time Standard (Specify)					UNIT	h II		8 11		ou uj					2		
Site/location: WATER LOU, I A	+								2					oify !					snedit in	
V II	-		Rush (Spec	(y)					NON				9	spe	90				900	
Sample Identification		Sample Date(s)	Time Start	Time Stop	Canister Vacuum in Field, "Hg (Start)	Canister Vacuum in Field, "Hg (Stop)	Flow Controller	Canister ID	TO-15 U	TO-14A	EPA 3C	EPA 26C	ASTM D-1946	Other (Please	Sample Type	Indoor Air	Ambient Air	Soil Gas	Landfill Gas	
SS-17	4	28	1115	1145	-28,5	-4		lele31	X											
SSD-17		1	1144	1214	-28	-3		1536												
SS-22			1508	1550	-30	-3.8		6578								7				
55.13		V	1437	1715	-28.5	-2.5		42342N	1			11.7			11				-	
Sampled by: John brimeur			1		Temperatur	e (Fahrenhei	1)						-						+	
John primeder		Interior Ambient																		
sampled by: John brimeyer jennifor clancey		Start	72°F		4550° F		V = =													
		Stop											_							
	-		Interior			iches of Hg)	_		-	_				_			_		-	
	-	Start	Interior		Ambient										-	-			-	

TestAmerica

704 EN (ENDERS) DRIVE - CEDAR FACED IA 50613 806-750-2401 - 315-271-2435 Fax

THE LEADER IN ENVIRONMENTAL TESTING

IH Sample Receipt Form Project: Chamberlain Receiver's Initials: SH Time (Delivered): (8:00 COC Completed Correctly? X Yes (Cite inconsistencies below) Sample Checklist (Check indicates conformance failure) Couriers Received Broken Information Missing UPS TA Courier Missing Sample Improper Media TA Field Services FedEx Sample Past Hold Date Missing Label Temperature Extra Sample DHL Client COC Discrepancy Insufficient Sample Volume USPS Other Other: Spee-Dee Samples Not Received in a Cooler Reviewed By BCb Date 4/29/11 Temperature Not Taken Comments

HaQA FoldenQA Forms & Log Book pgsalk Cooler Receiptrev6.goc

Remarks/Action Taken:

Initial/Date:



THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc. TestAmerica Cedar Falls 704 Enterprise Drive Cedar Falls, IA 50613 Tel: 800-750-2401

TestAmerica Job ID: CUD1698

Client Project/Site: Chamberlain Vapor Sampling

Client Project Description: TO-15 Scans

For:

TERRACON - BETTENDORF 870 40th Avenue Bettendorf, IA 52722

Attn: John Brimeyer

Authorized for release by: 05/11/2011 03:52:12 PM

Brian C. Graettinger
Operations Manager
brian.graettinger@testamericainc.com

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results through
Total Access

Have a Question?



Visit us at: www.testamericainc.com This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Case Narrative

Client: TERRACON - BETTENDORF Project/Site: Chamberlain Vapor Sampling TestAmerica Job ID: CUD1698

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Job ID: CUD1698

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Laboratory: TestAmerica Cedar Falls

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Narrative

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Analyzed by TestAmerica - Knoxville, TN.

R.

Sample Summary

Matrix

Air

Аіг

Air

Air

Air

Air

Client: TERRACON - BETTENDORF Project/Site: Chamberlain Vapor Sampling

Client Sample ID

Equipment Blank-1

SS-47

SS-28

SS-56

SS-60

SS-G

Lab Sample ID

CUD1698-01

CUD1698-02

CUD1698-03

CUD1698-04

CUD1698-05

CUD1698-06

TestAmerica Job ID: CUD1698

Collected	Received
04/28/11 09:00	04/28/11 19:40
04/28/11 09:57	04/28/11 19:40
04/28/11 10:57	04/28/11 19:40
04/28/11 11:52	04/28/11 19:40
04/28/11 18:28	04/28/11 19:40

04/28/11 19:40

04/28/11 18:48

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F

Client: TERRACON - BETTENDORF

Project/Site: Chamberlain Vapor Sampling

Client Sample ID: SS-47 Date Collected: 04/28/11 09:00

Lab Sample ID: CUD1698-01 Matrix: Air

Date Received: 04/28/11 19:40

Method: EPA TO-15 - Air Sample Analysis - Subcontract Result Qualifier Analyte MDL Unit Analyzed RL D Analyst Dil Fac See 0.10 BCG 05/04/11 15:15 Volatile Organic Compounds mg 1.0

Attached Report

Client Sample ID: SS-28 Lab Sample ID: CUD1698-02

Date Collected: 04/28/11 09:57

Date Received: 04/28/11 19:40

Matrix: Air

Method: EPA TO-15 - Air Sample Analysis - Subcontract Analyte Result Qualifier RL MDL Unit D Analyst Analyzed Dil Fac Volatile Organic Compounds See 0.10 05/04/11 14:21 mg Attached Report.

Client Sample ID: SS-56

Date Collected: 04/28/11 10:57 Date Received: 04/28/11 19:40

Lab Sample ID: CUD1698-03

Matrix: Air

Method: EPA TO-15 - Air Sample Analysis - Subcontract

Result Qualifier RL Dil Fac Analyst Analyzed Volatile Organic Compounds See 0.10 BCG 05/04/11 16:11 1.0 ma Attached

Report

Client Sample ID: SS-60

Date Collected: 04/28/11 11:52 Date Received: 04/28/11 19:40

Lab Sample ID: CUD1698-04

Matrix: Air

Method: EPA TO-15 - Air Sample Analysis - Subcontract

Analyte Result Qualifier RL MDL Unit D Analyst Analyzed Dil Fac BCG Volatile Organic Compounds See 0.10 05/04/11 17:03 mg 10 Attached Report

Client Sample ID: SS-G

Date Collected: 04/28/11 18:28

Date Received: 04/28/11 19:40

Lab Sample ID: CUD1698-05

Matrix: Air

Method: EPA TO-15 - Air Sample Analysis - Subcontract

Result Qualifier Analyte RL MDL Unit D Analyst Analyzed Dil Fac Volatile Organic Compounds BCG See 0.10 mg 05/04/11 17:55 1.0

Attached Report

Client Sample ID: Equipment Blank-1

Date Collected: 04/28/11 18:48 Date Received: 04/28/11 19:40

Lab Sample ID: CUD1698-06

Matrix: Air

Method: EPA TO-15 - Air Sample Analysis - Subcontract

Analyte Result Qualifier RL MOL Unit D Analyst Analyzed Dil Fac 0.10 Volatile Organic Compounds See mg BCG 05/04/11 18:55 1.0

Attached Report.



TestAmerica Laboratories, Inc.

ANALYTICAL REPORT

PROJECT NO. CUD1698

Terracon

Lot #: H1E030527

Brian Graettinger

TestAmerica Cedar Falls 704 Enterprise Drive Cedar Falls, IA 50613-0625

TESTAMERICA LABORATORIES, INC.

Jamie A. McKinney Project Manager

May 9, 2011

ANALYTICAL METHODS SUMMARY

H1E030527

PARAMET	ER	ANALYTICAL METHOD
Volatil	e Organics by TO15	EPA-2 TO-15
Referen	ces:	
EPA-2	"Compendium of Methods for the Dete Organic Compounds in Ambient Air", January 1999.	

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H1E030527

SAMPLE SUMMARY

SAMPLED SAMP DATE WO # SAMPLE# CLIENT SAMPLE ID TIME 001 MHTTO CUD1698-01 04/28/11 09:00 MHTT7 002 CUD1698-02 04/28/11 09:57 MHTVC 003 CUD1698-03 04/28/11 10:57 MHTVE 004 CUD1698-04 04/28/11 11:52 005 MHTVF CUD1698-05 04/28/11 18:28 MHTVL 005 CUD1698-06 04/28/11 18:48

NOTE (S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

PROJECT NARRATIVE H1E030527

The results reported herein are applicable to the samples submitted for analysis only. If you have any questions about this report, please call (865) 291-3000 to speak with the TestAmerica project manager listed on the cover page.

This report shall not be reproduced except in full, without the written approval of the laboratory.

The original chain of custody documentation is included with this report.

Sample Receipt

There were no problems with the condition of the samples received.

Quality Control and Data Interpretation

Unless otherwise noted, all holding times and QC criteria were met and the test results shown in this report meet all applicable NELAC requirements.

EPA methods TO-14A and TO-15 specify the use of humidified "zero air" as the blank reagent for canister cleaning, instrument calibration and sample analysis. Ultra-high purity humidified nitrogen from a cryogenic reservoir is used in place of "zero air" by TestAmerica Knoxville.

Sample CUD1698-06 was reported with elevated reporting limits for all analytes due to the presence of non-target compounds. A dilution was necessary prior to analysis, and the reporting limits were adjusted accordingly.

TestAmerica Knoxville maintains the following certifications, approvals and accreditations: Arkansas DEQ Lab #88-0688, California DHS ELAP Cert. #2423, Colorado DPHE, Connecticut DPH Lab #PH-0223, Florida DOH Lab #E87177, Georgia DNR Lab #906, Hawaii DOH, Illinois EPA Lab #200012, Indiana DOH Lab #C-TN-02, Iowa DNR Lab #375, Kansas DHE Cert. #E-10349, Kentucky DEP Lab #90101, Louisiana DEQ Cert. #03079, Louisiana DOHH, Maryland DOE Cert. #277, Michigan DEQ Lab #9933, Nevada DEP, New Jersey DEP Lab #TN001, New York DOH Lab #10781, North Carolina DFH Lab #21705, North Carolina DEHNR Cert. #64, Ohio EPA VAP Lab #CL0059, Oklahoma DEQ Lab #9415, Pennsylvania DEP Lab #68-00576, South Carolina DHEC Cert #84001001, Tennessee DOH Lab #02014, Texas CEQ, Utah DOH Lab # QUAN3, Virginia DGS Lab #00165, Washington DOE Lab #C1314, West Virginia DEP Cert. #345, West Virginia DHHR Cert #9955C, Wisconsin DNR Lab #98044300, Naval Facilities Engineering Service Center and USDA Soil Permit #S-46424. This list of approvals is subject to change and does not imply that laboratory certification is available for all parameters reported in this environmental sample data report.

Client Sample ID: CUD1698-01

GC/MS Volatiles

Lot-Sample #	H1E030527 - 001		Work Order#	MHTT01AA	Mat	AIR	
Date Sampled: Prep Date: Prep Batch #: Dilution Factor.:	04/28/2011 05/04/2011 1125185		Date Received: Analysis Time: Analysis Time: Method	05/03/2011 05/04/2011 15:15 TO-15			
PARAMETER		RESULTS (ppb(v/v))	REPORTING LIMIT (ppb(v/v))	MDL (ppb(v/v))	RESULTS (ug/m3)	REPORTING LIMIT (ug/m3)	MDL (ug/m3)
cis-1,2-Dichloroethene		ND	0.080	0.024	ND	0.32	0.095
1,1-Dichloroethene		ND	0.080	0.013	ND	0.32	0.052
Vinyl chloride		ND	0,080	0,029	ND	0,20	0.074
1,1-Dichloroethane		ND	0.080	0.010	ND	0.32	0.040
1,1,1-Trichloroethane		0.24	0.080	0.012	1,3	0.44	0.065
Crichloroethene		1.1	0.040	0.014	5.8	0.21	0.075
rans-1,2-Dichloroether	ne	ND	0.080	0.020	ND	0.32	0.079
Tetrachloroethene		0.42	0.080	0.016	2.8	0.54	0.11
1,1,2-Trichloroethane		ND	0.080	0.021	ND	0.44	0.11
SURROGATE			PERCENT RECOVERY		CON	ORATORY TROL ITS (%)	
4-Bromofluorobenzene			104		60 -	140	-

 $Result \ (ug/m3) = Result \ (ppb(v/v)) [unrounded] \ * \ (Molecular \ Weight/24.45)$

 $Reporting\ Limit\ (ug/m3) = Reporting\ Limit\ (ppb(v/v))[unrounded] \ ^* \ (Molecular\ Weight/24.45)$

 $MDL \ (ug/m3) = MDL \ (ppb(v/v)) | uuroundedj * (Molecular Weight/24.45)$

Client Sample ID: CUD1698-02

GC/MS Volatiles

Lot-Sample #	H1E030527 - 002	Work Order #	MHTT71AA	Matrix	i	AIR
Date Sampled:	04/28/2011	Date Received:	05/03/2011			
Prep Date:	05/04/2011	Analysis Time:	05/04/2011			
Prep Batch #:	1125185	Analysis Time	14:21			
Dilution Factor.:	80.5	Method	TO-15			

PARAMETER	RESULTS (ppb(v/v))	REPORTING LIMIT (ppb(v/v))	MDL (ppb(v/v))	RESULTS (ug/m3)	REPORTING LIMIT (ug/m3)	MDL (ng/m3)
1,1,2-Trichforoethane	ND	6.4	1.7	ND	35	9,2
Tetrachloroethene	17	6.4	1.3	120	44	8.7
trans-1,2-Dichloroethene	ND	6.4	1.6	ND	26	6.4
Trichloroethene	1100	3.2	1.1	6000	17	6.1
1,1,1-Trichloroethane	20	6.4	0.97	110	35	5,3
1,1-Dichloroethane	ND	6.4	0.80	ND	26	3.3
Vinyl chloride	ND	6.4	2.3	ND	16	6.0
I,I-Dichloroethene	ND	6.4	1.0	ND	26	4.1
cis-1,2-Dichloroethene	ND	6.4	1.9	ND	26	7.7

SURROGATE	PERCENT RECOVERY	LABORATORY CONTROL LIMITS (%)
4-Bromofluorobenzene	103	60 - 140

Result (ug/m3) = Result (ppb(v/v))[unrounded] * (Molecular Weight/24.45)

Reporting Limit (ug/m3) = Reporting Limit (ppb(v/v))[unrounded] \pm (Molecular Weight/24.45)

 $[\]mathbf{MDL}\;(\mathbf{ng/m3}) = \mathbf{MDL}\;(\mathbf{ppb}(\mathbf{v/v}))[\mathbf{unrounded}] \;\;^{\mathsf{u}}\;(\mathbf{Molecular}\;\mathbf{Weight/24.45})$

Client Sample ID: CUD1698-03

GC/MS Volatiles

Lot-Sample #	H1E030527 - 003		Work Order#	MHTVCIAA	Mat	rix AIR	
Date Sampled: Prep Date: Prep Batch #: Dilution Factor:	04/28/2011 05/04/2011 1125185 1		Date Received: Analysis Time: Analysis Time: Method	05/03/2011 05/04/2011 16:11 TO-15			
PARAMETER		RESULTS (ppb(v/v))	REPORTING LIMIT (ppb(v/v)	MDL (ppb(v/v))	RESULTS (ug/m3)	REPORTING LIMIT (ug/m3)	MDL (ug/m3)
cis-1,2-Dichloroethen	e	0.030 J	0.080	0.024	0.12 J	0.32	0.095
1,I-Dichloroethene		ND	0.080	0.013	ND	0.32	0.052
Vinyl chloride		ND	0.080	0.029	ND	0.20	0.074
1,1-Dichloroethane		ND	0.080	0.010	ND	0.32	0.040
1,1,1-Trichloroethane		0.15	0.080	0.012	0.83	0.44	0.065
Trichloroethene		0.71	0.040	0.014	3.8	0.21	0.075
trans-1,2-Dichloroethe	ne	ND	0.080	0.020	ND	0.32	0.079
Tetrachloroethene		0.12	0.080	0.016	0.83	0.54	0.11
I,1,2-Trichloroethane		ND	0.080	0,021	ND	0,44	0.11
SURROGATE			PERCENT		CON	ORATORY TROL ITS (%)	
4-Bromofluorobenzene			102		60 -	140	-

Qualifiers

J Estimated result. Result is less than RL.

Result (ug/m3) = Result (ppb(v/v))[unrounded] * (Molecular Weight/24.45)

 $\mathbf{Reporting\ Limit\ (ug/m3) = Reporting\ Limit\ (ppb(v/v))[uurounded]*(Molecular\ Weight/24.45)}$

 $\mathbf{MDL} \; (ug/m3) = \mathbf{MDL} \; (ppb(v/v)) [unrounded] \; ^{\circ} \; (Molecular \; Weight/24.45)$

Client Sample ID: CUD1698-04

GC/MS Volatiles

Lot-Sample #	HIE030527 - 004		Work Order#	MHTVELAA	Mati	rix AIR	
Date Sampled: Prep Date: Prep Batch #: Dilution Factor.:	04/28/2011 05/04/2011 1125185		Date Received: Analysis Time: Analysis Time: Method	05/03/2011 05/04/2011 17:03 TO-15			
PARAMETER		RESULTS (ppb(v/v))	REPORTING LIMIT (ppb(v/v)	MDL. (ppb(v/v))	RESULTS (ug/m3)	REPORTING LIMIT (ug/m3)	MDL (ug/m3)
1,1,2-Trichloroethane		ND	0,080	0.021	ND	0.44	0,11
Tetrachloroethene		0.36	0.080	0.016	2.5	0.54	0.11
trans-1,2-Dichloroether	ne	ND	0.080	0.020	ND	0.32	0.079
Trichloroethene		1.1	0.040	0.014	6.2	0.21	0.075
1,1,1-Trichloroethane		1.6	0.080	0.012	8.5	0.44	0.065
Vinyl chloride		ND	0.080	0.029	ND	0.20	0.074
1,1-Dichloroethane		ND	0.080	0.010	ND	0.32	0.040
1,1-Dichloroethene		ND	0.080	0.013	ND	0.32	0.052
cis-1,2-Dichloroethene		ND	0.080	0.024	ND	0.32	0.095
SURROGATE			PERCENT RECOVERY		CON	ORATORY (TROL (TS (%)	
4-Bromofluorobenzene	k.		102		60 -	140	

 $Result \, (ug/m3) = Result \, (ppb(v/v)) [unrounded] \, * \, (Molecular \, Weight/24,45)$

 $Reporting\ Limit\ (ug/m3) = Reporting\ Limit\ (ppb(v/v))[uarounded]\ *\ (Molecular\ Weight/24.45)$

 $[\]mathbf{MDL} \; (\mathbf{ug/m3}) = \mathbf{MDL} \; (\mathbf{ppb}(\mathbf{v/v})) [\mathbf{unrounded}] \; ^{+} \; (\mathbf{Molecular} \; \mathbf{Weight/24.45})$

0.44

0.21

0.32

0.54

0.44

0.065

0.075

0.079

0.11

0.11

TestAmerica Cedar Falls

Client Sample ID: CUD1698-05

GC/MS Volatiles

Lot-Sample #	H1E030527 - 005		Work Order #	MHTVFIAA	Mat	rix AIR	
Date Sampled:	04/28/2011		Date Received:	05/03/2011			
Prep Date:	05/04/2011		Analysis Time:	05/04/2011			
Prep Batch #:	1125185		Analysis Time:	17:55			
Dilution Factor,:	1		Method:	TO-15			
PARAMETER		RESULTS (ppb(v/v))	REPORTING LIMIT (ppb(v/v))	MDL (ppb(v/v))	RESULTS (ag/m3)	REPORTING LIMIT (ug/m3)	MDL (ug/m3)
cis-1,2-Dichloroethe	ene	0.31	0.080	0.024	1.2	0.32	0.095
1,1-Dichloroethene		ND	0.080	0.013	ND	0.32	0.052
1,1-Dichloroethane		ND	0.080	0.010	ND	0.32	0.040
Vinyl chloride		ND	0.080	0.029	ND	0.20	0.074

0.012

0.014

0.020

0.016

0.021

0.42 J

3.8

ND

2.2

0.23 J

4-Bromofluorobenzene	100	60 - 140
SURROGATE	PERCENT RECOVERY	LABORATORY CONTROL LIMITS (%)

0.080

0.040

0.080

0.080

0.080

0.076 J

0.71

ND

0.32

0.043 J

Qualifiers

1,1,1-Trichlorocthane

trans-1,2-Dichloroethene

1,1,2-Trichloroethane

Trichloroethene

Tetrachloroethene

J Estimated result. Result is less than RL.

Result (ug/m3) = Result (ppb(v/v))[unrounded] * (Molecular Weight/24.45)

 $Reporting \ Limit \ (ug/m3) = Reporting \ Limit \ (ppb(v/v)) [unrounded] \ * \ (Molecular \ Weight/24.45)$

MDL (ug/m3) = MDL (ppb(v/v))[unrounded] * (Molecular Weight/24.45)

Client Sample ID: CUD1698-06

GC/MS Volatiles

Lot-Sample #	H1E030527 - 006	Work Order #	MHTVL1AA	Matrix:	AIR
Date Sampled;	04/28/2011	Date Received:	05/03/2011		
Prep Date:	05/04/2011	Analysis Time:	05/04/2011		
Prep Batch #:	1125185	Analysis Time:	18:55		
Dilution Factor.:	1,64	Method	TO-15		

PARAMETER	RESULTS (ppb(v/v))	REPORTING LIMIT (ppb(v/v))	MDL (ppb(v/v))	RESULTS (ng/m3)	REPORTING LIMIT (ug/m3)	MDL (ug/m3)
1,1,2-Trichloroethane	ND	0.13	0.034	ND	0.72	0.19
Tetrachloroethene	0.16	0.13	0.026	1.1	0.89	0.18
trans-1,2-Dichloroethene	ND	0.13	0.033	ND	0.52	0.13
Trichloroethene	0.042 J	0.066	0.023	0.22 J	0.35	0.12
1,1,1-Trichloroethane	ND	0.13	0.020	ND	0.72	0.11
Vinyl chloride	ND	0.13	0.048	ND	0.34	0.12
1,1-Dichloroethane	ND	0.13	0.016	ND:	0.53	0.066
1,1-Dichloroethene	ND	0.13	0,021	ND	0.52	0.085
cis-1,2-Dichloroethene	ND	0.13	0.039	ND	0.52	0.16

SURROGATE	PERCENT RECOVERY	LABORATORY CONTROL LIMITS (%)
4-Bromofluorobenzene	99	60 - 140

Qualifiers

J Estimated result. Result is less than RL.

 $Result \ (ug/m3) = Result \ (ppb(y/y))[unrounded] \ ^* \ (Molecular \ Weight/24.45)$

 $Reporting \ Limit \ (ng/m3) = Reporting \ Limit \ (ppb(v/v))[unrounded] \ ^{\pm} \ (Molecular \ Weight/24,45)$

MDL (ug/m3) = MDL (ppb(v/v))[unrounded] * (Molecular Weight/24.45)

Client Sample ID: INTRA-LAB BLANK

GC/MS Volatiles

Lot-Sample #	H1E050000 - 185B		Work Order#	MHXQT1AE	Mati	rix AIR	
Prep Date: Prep Batch #: Dilution Factor.:	04/28/2011 05/04/2011 1125185		Date Received: Analysis Time: Analysis Time: Method	05/03/2011 05/04/2011 13:33 TO-15			
PARAMETER		RESULTS (ppb(v/v))	REPORTING LIMIT (ppb(v/v))	MDL (ppb(v/v))	RESULTS (ug/m3)	REPORTING LIMIT (ug/m3)	MDL (ug/m3)
cis-1,2-Dichloroethene		ND	0.080	0.024	ND	0.32	0.095
1,1-Dichloroethene		ND	0.080	0.013	ND	0.32	0.052
√inyl chloride		ND	0.080	0.029	ND	0,20	0.074
1,1-Dichloroethane		ND	0.080	0.010	ND	0.32	0.040
1,1,1-Trichloroethane		ND	0.080	0.012	ND	0,44	0.065
Trichloroethene		ND	0.040	0.014	ND	0,21	0.075
rans-1,2-Dichloroethe	ne	ND	0.080	0.020	ND	0.32	0.079
Tetrachloroethene		ND	0.080	0.016	ND	0.54	0.11
1,1,2-Trichloroethane		ND	0.080	0.021	ND	0.44	0.11
SURROGATE			PERCENT RECOVERY		CON	ORATORY TROL ITS (%)	
4-Bromofluorobenzene			100		60 -	140	

 $Result \ (ug/m3) = Result \ (ppb(v/v)) [unrounded] * (Molecular \ Weight/24.45)$

 $Reporting\ Limit\ (ug/m3) = Reporting\ Limit\ (ppb(v/v))[unrounded] * (Molecular\ Weight/24.45)$

 $MDL\ (ug/m3) = MDL\ (ppb(v/v))[unrounded] * (Molecular\ Weight/24.45)$

Client Sample ID: CHECK SAMPLE

GC/MS Volatiles

Lot-Sample #	H1E050000 - 185C		Work Order#	MHXQTIAF		Matrix	AIR
Prep Date: Prep Batch #: Dilution Factor.;	04/28/2011 05/04/2011 1125185		Date Received: Analysis Time: Analysis Time: Method	05/03/2011 05/04/2011 11:41 TO-15			
PARAMETER		SPIKE AMOUNT (ppb(v/v))	MEASURED AMOUN'T (ppb(v/v))	SPIKE AMOUNT (ug/m3)	MEASURED AMOUNT (ug/m3)	PERCENT RECOVERY	RECOVERY LIMITS
1,1,2-Trichloroethane		5.00	5.52	27.3	30.L	110	70 - 130
Petrachloroethene		5,00	5,25	33.9	35.6	105	70 - 130
rans-1,2-Dichloroethe	me	5.00	5.54	19.8	22.0	111	70 - 130
Prichloroethene		5.00	5.35	26.9	28.8	107	70 - 130
1,1,1-Trichloroethane		5.00	5.55	27.3	30,3	111	70 - 130
1,1-Dichloroethane		5,00	5.53	20.2	22.4	111	70 - 130
Vinyl chloride		5.00	5.33	12.8	13.6	107	70 - 130
cis-1,2-Dichloroethene		5,00	5.51	19,8	21.8	110	70 - 130
1,1-Dichloroethene		5.00	5.57	19.8	22.1	111	70 - 130
SURROGATE			PERCENT RECOVERY			LABORATORY CONTROL- LIMITS (%)	
4-Bromofluorobenzen	0		102			60 = 448	

Result (ug/m3) = Result (ppb(v/v))[unrounded] * (Molecular Weight/24.45)

 $Reporting\ Limit\ (ug/m3) = Reporting\ Limit\ (ppb(v/v))[uarounded]\ *\ (Molecular\ Weight/24.45)$

 $MDL \; (ug/m3) = MDL \; (ppb(v/v))[unrounded] \; ^{*} \; (Molecular \; Weight/24.45)$

SUBCONTRACT ORDER

TestAmerica Cedar Falls CUD1698

141E030527

SENDING LABORATORY:

TestAmerica Cedar Falls 704 Enterprise Drive Cedar Falls, IA 50613 Phone: 800-750-2401

Fax: 319-277-2425

Project Manager: Brian C. Graettinger

RECEIVING LABORATORY:

TestAmerica Knoxville 5815 Middlebrook Pike Knoxville, TN 37921 Phone :(865) 291-3000

Fax: -

Analysis	Due	Expires	Comments	
	Air	Volume	7.7.5.100 a 201a	
Sample ID: CUD1698-01 - Air	Sampled: 04/28/11 09:00	(in L):	1320N w/179	
AIR - Summa Canister Rental	05/13/11 12:00	09/12/38 09:00		
AIR - VOC Scan (TO-15)	05/13/11 12:00	07/27/11 09:00		
AIR - Flow Controller Rental	05/13/11 12:00	02/09/85 09:00		
	Air	Volume	1400 140	
Sample ID: CUD1698-02 Air	Sampled: 04/28/11 09:57	(in L):	1519 w/26	
AIR - Flow Controller Rental	05/13/11 12:00	02/09/85 09:57		
AIR - Summa Canister Rental	05/13/11 12:00	09/12/38 09:57		
AIR - VOC Scan (TO-15)	05/13/11 12:00	07/27/11 09:57		
Sample ID: CUD1698-03 Air	Sampled: 04/28/11 10:57	Volume (In L):	6349 w/142	
Sample ID. COD1056-05 An	Sampled: 04/26(11 10:37	(in L):	0347 11/142	
AIR - VOC Scan (TO-15)	05/13/11 12:00	07/27/11 10:57		
AIR - Flow Controller Rental	05/13/11 12:00	02/09/85 10:57		
AIR - Summa Canister Rental	05/13/11 12:00	09/12/38 10:57		
Sample ID: CUD1698-04 Air	Sampled: 04/28/11 11:52	Volume	93219 w/82	
Sample ID: CUD1698-04 Air	Sampieu: 04/28/11 11:52	(in L):	23419 W/64	
AIR - Summa Canister Rental	05/13/11 12:00	09/12/38 11:52		
AIR - VOC Scan (TO-15)	05/13/11 12:00	07/27/11 11:52		
tem mi m il m		*************		

ECA Réleased By

AIR - Flow Controller Rental

4/29/11 Date 05/13/11 12:00

Entrant Adding

02/09/85 11:52

5/3/11 105: Date

Released By

Date

Received By

Date

Page 1 of 2

SUBCONTRACT ORDER

TestAmerica Cedar Falls CUD1698

H1E030227

Analysis	Due	Expires	Comments	
T. I. ID. CIVIDACAD OF ALL		r Volume	21220 1120	
Sample ID: CUD1698-05 Air	Sampled: 04/28/11 18:28	(in L):	21369 w/168	
AIR - Flow Controller Rental	05/13/11 12:00	02/09/85 18:28		
AIR - Summa Canister Rental	05/13/11 12:00	09/12/38 18:28		
AIR - VOC Scan (TO-15)	05/13/11 12:00	07/27/11 18:28		
Continue and the	Ai	r Volume	0.0	
Sample ID: CUD1698-06 Air	Sampled: 04/28/11 18:48	(in L):	1009	
AIR - VOC Scan (TO-15)	05/13/11 12:00	07/27/11 18:48		
AIR - Flow Controller Rental	05/13/11 12:00	02/09/85 18:48		
AIR - Summa Canister Rental	05/13/11 12:00	09/12/38 18:48		

B.C.H.o.B.

4/29/11

Received By Johns

5/3/11 Date 055

Released By

Date

Received By

Date

TAL Knoxville

5815 Middlebrook Pike Knoxville, TN 37921 phone 865-291-3000 fax 865-584-4315

Canister Samples Chain of Custody Record

TestAmerica assumes no liability with respect to the collection and shipment of these samples.

1	A	 \ominus	0.0
		 -	
-			

Client Contact Information	Project Ma	nager: J	ohn B.	rim eye	2/	Sampled By:	1	JA	1E/	RPU	3	1	Sampled By: JME/RPB of cocs							
Company: Terraw	Phone:563	3,355,000	2, jf6,	incyer	esturaco	Per	0						-							
Address: 570 40th Ave City/State/Zip Bettendorf, TA 51722 Phone: 563-355-0702 FAX: 563-355-4789	Site Conta	FAL Contact: 60m						RL					section)						section)	
Project Name: CHAMBERLAIN VAROR SAME			+	1700	_			1		1			103						168	
Site/location: WATERLOS TA	-	Standard S	Turnarou			-		Leve		1			specify in notes						n no	
PO#	-	Rush (Spec						7					acify						clfy	
								3				9		ge		40		10	e spe	
Sample Identification	Sample Date(s)	Time Start	Time Stop	Canister Vacuum in Field, "Hg (Start)		Flow Controller	Canister ID	TO-15 L	TO-14A	EPA 3C	EPA 25C	ASTM D-1946	Other (Please	Sample Type	Indoor Air	Ambient Alr	Soil Gas	Landfill Gas	Other (Please specify in notes	
55-47	4/28/11	818	900	-30	- 7.5	25179	1320N	X						-			X			
55-28	1	915	957	-25.5	-1.5	+119/20		X							=1		X			
55-56		1013	1057		=1.0	142	6349	X									X			
55-60		1115	1152		1	82	93219	X			H						X		Ħ	
55-6		1745	1828		-1	168	21369	X									X			
EQUIPMENT BLANK-1	+	1846	1848	_	_	-	Word	X									X			
	Temperature (Fahrenheit)		1	Box	P	ece	iveo	10	A	nh:	art	12	orc		
Sampled by: Instin Enwall Anthon		Interior		Ambient				Custody Seals intock lecans												
01 0 10000	Start	720	F	45-50°F				FRO	1 Fa	1: 4	207	127	TO	699	19	le.	FID	WS		
Rob Begman/ Rel See	Stop	720	F	45-	5,0€			Fed Fx: 4208 270769999 U Flows												
				Pressure (in	nches of Hg)					1112		,								
	/	Interior		Ambient						_										
	Start																			
	Stop																			
Special Instructions/QC Requirements & Comment - dropped aff at Cadar Falls	S: VOC b	EPA Americ	TO-15	ation,	level	Summa	glandy bux is	sis r	cqu	rall	4	00.	h	Post	1					
Canisters Shipped by:	Date/Time:																			
Samples Relinquished by Terracon		4/28/1	1 19	:40	Received		4/28	11/11	199	10										
Relinquished by:	Date/Time:			/	Received	theil H	Deins 5	13/1	1 10	252										







TESTAMERICA KNOXVILLE SAMPLE RECEIPT/CONDITION UPON RECEIPT ANOMALY CHECKLIST Lot Number: 4/5.03/527

Review Items	Yes	No	NA	If No, what was the problem?	Comments/Actions Taken
I. Do sample container labels match COC? (IDs, Dates, Times)	~			☐ 1a Do not match COC ☐ 1b Incomplete information ☐ 1c Marking smeared ☐ 1d Label torn ☐ 1e No label ☐ 1f COC not received ☐ 1g Other:	
 Is the cooler temperature within limits? (> freezing temp. of water to 6 °C, VOST: 10°C) 			/	☐ 2a Temp Blank = ☐ 2b Cooler Temp = ☐ 2c Cooling initiated for recently collected samples, ice present.	
 Were samples received with correct chemical preservative (excluding Encore)? 			~	☐ 3a Sample preservative =	
4. Were custody seals present/intact on cooler and/or containers?	/			☐ 4a Not present ☐ 4b Not intact ☐ 4c Other:	
5. Were all of the samples listed on the COC received?	1			☐ 5a Samples received-not on COC ☐ 5b Samples not received-on COC	
5. Were all of the sample containers received intact?	/			☐ 6a Leaking ☐ 6b Broken	
7. Were VOA samples received without headspace?			1	☐ 7a Headspace (VOA only)	
8. Were samples received in appropriate containers?	/			☐ 8a Improper container	
Did you check for residual chlorine, if necessary?			1	☐ 9a Could not be determined due to matrix interference	
0. Were samples received within holding time?	~			☐ 10a Holding time expired	
11. For rad samples, was sample activity info. provided?			V	☐ Incomplete information	
2. For 1613B water samples is pH<9?			/	If no, was pH adjusted to pH 7 - 9 with sulfuric acid?	
3. Are the shipping containers intact?	1			☐ 13a Leaking ————————————————————————————————————	
4. Was COC relinquished? (Signed/Dated/Timed)	V			☐ 14a Not relinquished	
5. Are tests/parameters listed for each sample?	/			☐ 15a Incomplete information	
6. Is the matrix of the samples noted?	1			☐ 15a Incomplete information	
7. Is the date/time of sample collection noted?	1			☐ 15a Incomplete information	
8. Is the client and project name/# identified?	1			☐ 15a Incomplete information	
9. Was the sampler identified on the COC? Quote #: 87809 PM Instructions: 1	1				

Sample Receiving Associate:

Date: 3/3/11

QA026R22.doc, 012811





Page 22 of 26

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Test America - Knoxville Air Canister Dilution Log	
Lot Number: H1E030527	

			Initial Can Pressure	e								Sub	sequent I	Dilutions	5			
Analyst/Date	Tedlar Bag Time	Pbarr (in)	Sample ID	Can#	13/13/13/13/13	Adj. Initial Pres. (- in or + psig)	Analyst/Date	1	Pbarr (in)	Initial Pres. Pi (in)	Final Pres. Pf (psig)	First InCan Final Pres. Pf (psig)	Second In-can Final Pres. Pf (psig)	Third InCan Final Pres. Pf (psig)	Serial Dilution Can #	Vol (mL)	Final Pres, Pf (psig)	Comments
5-4-11	AU	29.08	MHTTO	1320N	-1.1											1/ 1/		9197
			MHTT7	1519	-1.3	+29.7												+
		-27	MHTVC 3	6349	-1.3													9193
			MHTVE	93219	-1.4													9197
			MHTVF	21639	-0.9	(i =)												9193
+		6	MHTVL	1009N	-19.8	+0.7												9197

& Grab sample.

Certification Summary

Client: TERRACON - BETTENDORF Project/Site: Chamberlain Vapor Sampling TestAmerica Job ID: CUD1698

Laboratory	Authority	Program	EPA Region	Certification ID
TestAmerica Cedar Falls		AlHA		101044
TestAmerica Cedar Falls	Illinois	NELAC	5	200024
TestAmerica Cedar Falls	lowa	State Program	7	7
TestAmerica Cedar Falls	Kansas	NELAG	7	E-10341
TestAmerica Cedar Falls	Minnesota	NELAC	5	019-999-319
TestAmerica Cedar Falls	North Dakota	State Program	8	R-186
TestAmerica Cedar Falls	Oregon	NELAC	10	IA100001
TestAmerica Cedar Falls	Wisconsin	State Program	5	999917270

Accreditation may not be offered or required for all methods and analytes reported in this package. Please contact your project manager for the laboratory's current list of certified methods and analytes.

Qualifier Definition/Glossary

Glossary		
Abbreviation	These commonly used abbreviations may or may not be present in this report.	
n	Listed under the "D" column to designate that the result is reported on a dry weight basis.	
EPA	United States Environmental Protection Agency	
ND	Not Detected above the reporting level.	
MDL	Method Detection Limit	
RL	Reporting Limit	
RE, RE1 (etc.)	Indicates a Re-extraction or Reanalysis of the sample.	
%R	Percent Recovery	
RPD	Relative Percent Difference, a measure of the relative difference between two points.	

Method Summary

Client: TERRACON - BETTENDORF Project/Site: Chamberlain Vapor Sampling

Method Description

Air Sample Analysis - Subcontract

TestAmerica Job ID: CUD1698

Protocol	Laboratory
	TAL CF

Protocol References:

Method

EPA TO-15

Laboratory References:

TAL CF = TestAmerica Cedar Falls, 704 Enterprise Drive, Cedar Falls, IA 50613, TEL 800-750-2401

TAL Knoxville

5815 Middlebrook Pike Knoxville, TN 37921 phone 865-291-3000 fax 865-584-4315

Canister Samples Chain of Custody Record

<u>TestAmerica</u>

TestAmerica assumes no liability with respect to the collection and shipment of these samples.

THE LEADER IN ENVIRONMENTAL TESTING

Client Contact Information Company: Terraco	Project Ma	nager: J	ohn B.	am eye	2/	Sampled By:	1	JA	E/	PPE	3	1 of 1 cocs								
Address: 870 40th Ave. City/State/Zip 13ettendorf, IA 5-1722. Phone: 563-355-0702	Site Conta TAL Conta	ct:	-7 () (0)	moyes	Evin	<u> </u>		RL					section)						ection)	
FAX: 563 -355 - 4789 Project Name: CHMIBEALATA VASON SAME	16	Analysis	Turnarou	nd Time				1											les s	
Site/location: WATEALOU, IA		Standard (S						010					in no						on ri	
PO#	-	Rush (Spec				1		7					secify						ecify	
Sample Identification	Sample Date(s)	Time Start	Time Stop	Canister Vacuum in Field, "Hg (Start)	Canister Vacuum in Field, 'Hg (Stop)	Flow Controller	Canister ID	TO-15 LOW	TO-14A	EPA 3C	EPA 25C	ASTM D-1946	Other (Please specify in notes	Sample Type	Indoor Air	Ambient Air	Soil Gas	Landfill Gas	Other (Please sp	
55-47	4/28/11	818	900	-30	- 1.5	25/79	1320N	X									X			
55-28	1	915	957	-25.5	-1.5	1320	1519	X									X	E		
55-56	3)5	1013	1057	-Z8.5	=1.0	142	6349	X							FI		X		1	
55-60		1115	1152	-27.5	-1.0	82	93219	X								1	X			
55-6		1745	1828	-28	-1	168	21369	X									X			
EQUIPMENT BLANK-1	4	1846	1848	-	_	_	loogN	X			TI						X			
					e (Fahrenheit)														
Justin Lawaii / ym	Start	Interior	r	Ambient				-		-	_	-	-			_				
Sampled by: Enwall / Justin Enwall / Justin Enwall / Justin Bergman/ Ruffer	Stop	720		45-50°F 45-50°F				-	_	_		_	_		_	_	_			
3 11		1 10			iches of Hg)											_	_			
		Interior		Ambient																
	Start	10-																		
	Stop																			
Special Instructions/QC Requirements & Comments - dropped aff at Cadar Falls	Voc be	EPA Amerik	TO-15	, lou	level	seposti.	buy i	si's t	cqui	cille	1	cer	h	Post	1					
Canisters Shipped by:	Date/Time:				Canisters	Received by:		-	-	_				-		_		-	_	
Samples Relinquished by:	Date/Time:	4/28/1	1 19	:40	Received	by:	4/28	11/11	184	0										
Relinquished by:	Date/Time:			1	Received	by:														







TestAmerica

704 ENTERNISE DRIVE + CEDAN FALLS IN 50015 806-756-2401 + 315-271-24201 AX

THE LEADER IN ENVIRONMENTAL TESTING

IH Sample Receipt Form

Date: 4/20/11	Receiver's Initials:	Time (Delivered):	
COC Completed Correct (Gite inconsistencies below) Sample Checklist (Check indi	-	•	
Received Broken	Information Missing		
Improper Media	Missing Sample	UPS TA Courier	
Missing Label	Sample Past Hold Date	FedEx TA Field Servi	
Temperature	Extra Sample	DHL Client	
COC Discrepancy	Insufficient Sample Volume	☐ USPS ☐ Other	
Other:		Spee-Dee	
Reviewed By BCG-	Date 4/29/11	Samples Not Received in a Coole Temperature Not Taken	
Remarks/Action Taken:		Initial/Date:	

H:rQA FolderiQA Forms & Log Buok ags/lin Cooler Receiptrev6.doc

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc. TestAmerica Cedar Falls 704 Enterprise Drive Cedar Falls, IA 50613 Tel: 800-750-2401

TestAmerica Job ID: CUE0002

Client Project/Site: Chamberlain Vapor Sampling #07107020

Client Project Description: TO-15 Scans

For:

TERRACON - BETTENDORF 870 40th Avenue Bettendorf, IA 52722

Attn: John Brimeyer

Authorized for release by: 05/17/2011 12:10:22 PM

Brian C. Graettinger **Operations Manager** brian.graettinger@testamericainc.com

LINKS

Review your project results through

Total Access

Have a Question?



Visit us at: www.testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Case Narrative

Client: TERRACON - BETTENDORF

Project/Site: Chamberlain Vapor Sampling #07107020

TestAmerica Job ID: CUE0002

Job ID: CUE0002

Laboratory: TestAmerica Cedar Falls

Narrative

Analyzed by TestAmerica - Knoxville, TN.

Sample Summary

Client: TERRACON - BETTENDORF

Project/Site: Chamberlain Vapor Sampling #07107020

TestAmerica Job ID: CUE0002

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
CUE0002-01	1A-33-B	Air	04/29/11 08:04	04/29/11 17:30
CUE0002-02	1A-33-1	Air	04/29/11 08:13	04/29/11 17:30
CUE0002-03	SS-33	Air	04/29/11 08:50	04/29/11 17:30
CUE0002-04	1A-4-B	Air	04/29/11 14:50	04/29/11 17:30
CUE0002-05	1A-4-1	Air	04/29/11 14:52	04/29/11 17:30
CUE0002-06	AA-4	Air	04/29/11 14:59	04/29/11 17:30
CUE0002-07	SS-4	Air	04/29/11 09:46	04/29/11 17:30
CUE0002-08	SS-37	Air	04/29/11 10:50	04/29/11 17:30
CUE0002-09	SS-20	Air	04/29/11 11:50	04/29/11 17:30
CUE0002-10	SS-48	Air	04/29/11 12:50	04/29/11 17:30
CUE0002-11	1A-48-B	Air	04/29/11 15:22	04/29/11 17:30
CUE0002-12	1A-48-B-D	Air	04/29/11 15:22	04/29/11 17:30
CUE0002-13	1A-48-MF	Air	04/29/11 15:25	04/29/11 17:30
CUE0002-14	SS-38	Air	04/29/11 13:57	04/29/11 17:30
CUE0002-15	SSD-38	Air	04/29/11 13:57	04/29/11 17:30
CUE0002-16	1A-38-MF	Air	04/29/11 16:02	04/29/11 17:30
CUE0002-17	1A-38-B	Air	04/29/11 16:05	04/29/11 17:30
CUE0002-18	SS-39	Air	04/29/11 15:19	04/29/11 17:30
CUE0002-19	SS-21	Air	04/29/11 16:30	04/29/11 17:30
CUE0002-20	Equipment Blank-2	Air	04/29/11 16:55	04/29/11 17:30

Client: TERRACON - BETTENDORF

Project/Site: Chamberlain Vapor Sampling #07107020

Client Sample ID: 1A-33-B Lab Sample ID: CUE0002-01

Date Received: 04/29/11 17:30

Date Collected: 04/29/11 08:04 Matrix: Air

Method: EPA TO-15 - Air Sample Analysis - Subcontract Result Qualifier Analyte MDL Unit RL D Analyst Analyzed Dil Fac See 0.10 BCG 05/05/11 13:23 Volatile Organic Compounds mg Attached Report

Client Sample ID: 1A-33-1 Lab Sample ID: CUE0002-02 Date Collected: 04/29/11 08:13 Matrix: Air

Date Received: 04/29/11 17:30

Method: EPA TO-15 - Air Sample Analysis - Subcontract Analyte Result Qualifier RL MDL Unit D Analyst Analyzed Dil Fac Volatile Organic Compounds See 0.10 BCG 05/05/11 14:17 mg Attached Report.

Client Sample ID: SS-33 Lab Sample ID: CUE0002-03 Date Collected: 04/29/11 08:50 Matrix: Air

Date Received: 04/29/11 17:30

Method: EPA TO-15 - Air Sample Analysis - Subcontract Result Qualifier RL Dil Fac Analyst Analyzed Volatile Organic Compounds See 0.10 BCG 05/05/11 11:39 1.0 ma Attached Report

Client Sample ID: 1A-4-B Lab Sample ID: CUE0002-04 Matrix: Air

Date Collected: 04/29/11 14:50 Date Received: 04/29/11 17:30

Method: EPA TO-15 - Air Sample Analysis - Subcontract Analyte Result Qualifier RL MDL Unit D Analyst Analyzed Dil Fac BCG 05/05/11 15:10 Volatile Organic Compounds See 0.10 1.0 mg Attached

Client Sample ID: 1A-4-1 Lab Sample ID: CUE0002-05

Report

Date Collected: 04/29/11 14:52 Date Received: 04/29/11 17:30

Method: EPA TO-15 - Air Sample Analysis - Subcontract Result Qualifier Analyte RL MDL Unit D Analyst Analyzed Dil Fac See Volatile Organic Compounds BCG 0.10 mg 05/05/11 16:05 1.0

Attached Report

Client Sample ID: AA-4 Lab Sample ID: CUE0002-06 Date Collected: 04/29/11 14:59 Matrix: Air

Date Received: 04/29/11 17:30

Method: EPA TO-15 - Air Sample Analysis - Subcontract Analyte Result Qualifier RL MOL Unit D Analyst Analyzed Dil Fac 0.10 Volatile Organic Compounds See mg BCG 05/05/11 16:59 1.0 Attached Report.

Matrix: Air

Client: TERRACON - BETTENDORF

Project/Site: Chamberlain Vapor Sampling #07107020

Lab Sample ID: CUE0002-07

Matrix: Air

Matrix: Air

Date Collected: 04/29/11 09:46 Date Received: 04/29/11 17:30

Client Sample ID: SS-4

Method: EPA TO-15 - Air Sample Analysis - Subcontract Result Qualifier Analyte MDL Unit RL D Analyst Analyzed Dil Fac See 0.10 BCG 05/05/11 12:28 Volatile Organic Compounds mg Attached Report.

Lab Sample ID: CUE0002-08

Client Sample ID: SS-37 Date Collected: 04/29/11 10:50

Date Received: 04/29/11 17:30

Method: EPA TO-15 - Air Sample Analysis - Subcontract Analyte Result Qualifier RL MDL Unit D Analyst Analyzed Dil Fac Volatile Organic Compounds See 0.10 BCG 05/05/11 17:55 mg Attached Report.

Client Sample ID: SS-20 Lab Sample ID: CUE0002-09 Date Collected: 04/29/11 11:50 Matrix: Air

Date Received: 04/29/11 17:30

Method: EPA TO-15 - Air Sample Analysis - Subcontract Result Qualifier RL Dil Fac Analyst Analyzed Volatile Organic Compounds See 0.10 BCG 05/05/11 18:54 1.0 ma Attached Report

Client Sample ID: SS-48 Lab Sample ID: CUE0002-10 Matrix: Air

Date Collected: 04/29/11 12:50 Date Received: 04/29/11 17:30

Method: EPA TO-15 - Air Sample Analysis - Subcontract

Analyte Result Qualifier RL MDL Unit D Analyst Analyzed Dil Fac BCG 05/05/11 19:50 Volatile Organic Compounds See 0.10 1.0 mg Attached Report

Client Sample ID: 1A-48-B Lab Sample ID: CUE0002-11 Matrix: Air

Date Collected: 04/29/11 15:22 Date Received: 04/29/11 17:30

Method: EPA TO-15 - Air Sample Analysis - Subcontract Result Qualifier Analyte RL MDL Unit D Analyst Analyzed Dil Fac See Volatile Organic Compounds BCG 0.10 mg 05/05/11 20:43 10 Attached

Lab Sample ID: CUE0002-12 Client Sample ID: 1A-48-B-D

Date Collected: 04/29/11 15:22 Date Received: 04/29/11 17:30

Method: EPA TO-15 - Air Sample Analysis - Subcontract Analyte Result Qualifier RL MOL Unit D Analyst Analyzed Dil Fac 0.10 Volatile Organic Compounds See mg BCG 05/05/11 21:35 1.0

Attached Report.

Report

Matrix: Air

Client: TERRACON - BETTENDORF

Project/Site: Chamberlain Vapor Sampling #07107020

Lab Sample ID: CUE0002-13

Date Collected: 04/29/11 15:25 Date Received: 04/29/11 17:30

Client Sample ID: 1A-48-MF

Matrix: Air

Method: EPA TO-15 - Air Samp	ole Analysis - Su	bcontract							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Analyst	Analyzed	Dil Fac
Volatile Organic Compounds	See Attached		0.10		mg		BCG	05/05/11 22:27	1.0
	Report.								

Lab Sample ID: CUE0002-14

Matrix: Air

Date Collected: 04/29/11 13:57 Date Received: 04/29/11 17:30

Client Sample ID: SS-38

Analyte	Result	Qualifier	RL	MDL	Unit	D	Analyst	Analyzed	Dil Fac
Volatile Organic Compounds	See	-	0.10		mg		BCG	05/05/11 23:20	1.0
	Attached				2.5				
	Report								

Client Sample ID: SSD-38 Lab Sample ID: CUE0002-15 Date Collected: 04/29/11 13:57 Matrix: Air

Date Received: 04/29/11 17:30

Method: EPA TO-15 - Air Sample Analysis - Subcontract Result Qualifier RL Dil Fac MDL Unit Analyst Analyzed Volatile Organic Compounds See 0.10 BCG 05/06/11 00:14 1.0 ma Attached Report.

Client Sample ID: 1A-38-MF Lab Sample ID: CUE0002-16

Date Collected: 04/29/11 16:02 Date Received: 04/29/11 17:30

Matrix: Air

Method: EPA TO-15 - Air Sample Analysis - Subcontract Analyte Result Qualifier RL MDL Unit D Analyst Analyzed Dil Fac Volatile Organic Compounds See 0.10 BCG 05/06/11 03:54 mg 10 Attached Report.

Client Sample ID: 1A-38-B Lab Sample ID: CUE0002-17 Date Collected: 04/29/11 16:05 Matrix: Air

Date Received: 04/29/11 17:30

Method: EPA TO-15 - Air Sample Analysis - Subcontract

Result Qualifier Analyte RL MDL Unit D Analyst Analyzed Dil Fac Volatile Organic Compounds BCG See 0.10 mg 05/06/11 02:08 1.0 Attached Report

Client Sample ID: SS-39 Lab Sample ID: CUE0002-18 Date Collected: 04/29/11 15:19 Matrix: Air

Date Received: 04/29/11 17:30

Method: EPA TO-15 - Air Sample Analysis - Subcontract Result Qualifier Analyte RL MDL Unit D Analyst Analyzed Dil Fac Volatile Organic Compounds See 0.10 mg BCG 05/06/11 04:47 1.0 Attached Report.

Analytical Data

Client: TERRACON - BETTENDORF

Project/Site: Chamberlain Vapor Sampling #07107020

TestAmerica Job ID: CUE0002

Client Sample ID: SS-21

Lab Sample ID: CUE0002-19

Dil Fac

Date Collected: 04/29/11 16:30 Matrix: Air

Date Received: 04/29/11 17:30

Method: EPA TO-15 - Air Sample Analysis - Subcontract Analyte Result Qualifier RL MDL Unit Analyst Analyzed D 0.10 BCG 05/06/11 05:41 Volatile Organic Compounds See mg

Attached Report.

Client Sample ID: Equipment Blank-2 Lab Sample ID: CUE0002-20

Date Collected: 04/29/11 16:55 Matrix: Air

Date Received: 04/29/11 17:30

Method: EPA TO-15 - Air Sample Analysis - Subcontract Result Qualifier RL MDL Analyst Analyzed Dil Fac Unit D Volatile Organic Compounds See 0.10 mg BCG 05/06/11 06:34 1.0

Attached Report.

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H1E040525 Analytical Report	1
Sample Receipt Documentation	33
Total Number of Pages	39



TestAmerica Laboratories, Inc.

ANALYTICAL REPORT

PROJECT NO. CUE0002

Terracon

Lot #: H1E040525

Brian Graettinger

TestAmerica Cedar Falls 704 Enterprise Drive Cedar Falls, IA 50613-0625

TESTAMERICA LABORATORIES, INC.

Jamie A. McKinney Project Manager

May 12, 2011

-

ANALYTICAL METHODS SUMMARY

H1E040525

DARAMETER	ANALYTICAL METHOD
Volatile Organics by TO15	EPA-2 TO-15

References:

EPA-2 "Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air", EPA-625/R-96/010b, January 1999.

SAMPLE SUMMARY

H1E040525

WO # S	AMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP
MHWD6	001	CUE0002-01	04/29/11	08:04
MHWD9	002	CUE0002-02	04/29/11	08:13
MHWEA	003	CUE0002-03	04/29/11	08:50
MHWED	004	CUE0002-04	04/29/11	14:50
MHWER	005	CUE0002-05	04/29/11	14:52
MHWET	006	CUE0002-06	04/29/11	14:55
MHWEW	007	CUE0002-07	04/29/11	09:46
MHWEX	008	CUE0002-08	04/29/11	10:50
MHWEO	009	CUE0002-09	04/29/11	11:50
MHWEZ	010	CUE0002-10	04/29/11	12:50
MHWE4	011	CUE0002-11	04/29/11	15:22
MHWE5	012	CUE0002-12	04/29/11	15:22
MHWEG	013	CUE0002-13	04/29/11	15:25
MHWE8	014	CUE0002-14	04/29/11	13:57
MHWFC	015	CUE0002-15	04/29/11	13:57
MHWFG	016	CUE0002-16	04/29/11	16:02
NHWFJ	017	CUE0002-17	04/29/11	16:05
MHWFL	018	CUE0002-18	04/29/11	15:19
MHMFQ	019	CUE0002-19	04/29/11	16:30
MHWFW	020	CUE0002-20	04/29/11	16:55

NOTE(S)

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight-

PROJECT NARRATIVE H1E040525

The results reported herein are applicable to the samples submitted for analysis only. If you have any questions about this report, please call (865) 291-3000 to speak with the TestAmerica project manager listed on the cover page.

This report shall not be reproduced except in full, without the written approval of the laboratory.

The original chain of custody documentation is included with this report.

Sample Receipt

There were no problems with the condition of the samples received.

Quality Control and Data Interpretation

Unless otherwise noted, all holding times and QC criteria were met and the test results shown in this report meet all applicable NELAC requirements.

EPA methods TO-14A and TO-15 specify the use of humidified "zero air" as the blank reagent for canister cleaning, instrument calibration and sample analysis. Ultra-high purity humidified nitrogen from a cryogenic reservoir is used in place of "zero air" by TestAmerica Knoxville.

Sample CUE0002-03 was reported with elevated reporting limits for all analytes due to the presence of non-target compounds. A dilution was necessary prior to analysis, and the reporting limits were adjusted accordingly.

The concentration of trichloroethene in samples CUE0002-07, CUE0002-10, and tetrachloroethene in samples CUE0002-14, CUE0002-15 exceeded the calibration level of the instrument. The samples were analyzed at a dilution to bring the concentration of the compound into the instrument calibration range. The results for both analyses are reported in order to provide the lowest possible reporting limits.

TestAmerica Knoxville maintains the following certifications, approvals and accreditations: Arkansas DEQ Lab #88-0688, California DHS ELAP Cert. #2423, Colorado DPHE, Connecticut DPH Lab #PH-0223, Florida DOH Lab #E87177, Georgia DNR Lab #906, Hawaii DOH, Illinois EPA Lab #200012, Indiana DOH Lab #C-TN-02, lowa DNR Lab #375, Kansas DHE Cert. #E-10349, Kentucky DEP Lab #90101, Louisiana DEQ Cert. #03079, Louisiana DOHH, Maryland DOE Cert. #277, Michigan DEQ Lab #9933, Nevada DEP, New Jersey DEP Lab #TN001, New York DOH Lab #10781, North Carolina DPH Lab #21705, North Carolina DEHNR Cert. #64, Ohio EPA VAP Lab #CL0059, Oklahoma DEQ Lab #9415, Pennsylvania DEP Lab #68-00576, South Carolina DHEC Cert #84001001, Tennessee DOH Lab #02014, Texas CEQ, Utah DOH Lab # QUAN3, Virginia DGS Lab #00165, Washington DOE Lab #C1314, West Virginia DEP Cert. #345, West Virginia DHR Cert #9955C, Wisconsin DNR Lab #998044300, Naval Facilities Engineering Service Center and USDA Soil Permit #S-46424. This list of approvals is subject to change and does not imply that laboratory certification is available for all parameters reported in this environmental sample data report.

Client Sample ID: CUE0002-01

GC/MS Volatiles

Lot-Sample # H	11E040525 - 001		Work Order#	MHWD61AA	Mat	rix AIR	
Date Sampled: Prep Date: Prep Batch #: Dilution Factor.:	04/29/2011 05/05/2011 1125343 1		Date Received; Analysis Time: Analysis Time: Method	05/04/2011 05/05/2011 13:23 TO-15			
PARAMETER		RESULTS (ppb(v/v))	REPORTING LIMIT (ppb(v/v))	MDL, (ppb(v/v))	RESULTS (ug/m3)	REPORTING LIMIT (ug/m3)	MDL (ug/m3)
cis-1,2-Dichloroethene		ND	0.080	0.024	ND	0.32	0.095
1,1-Dichloroethene		ND	0.080	0.013	ND	0.32	0.052
		ND	0.080	0,029	ND	0.20	0.074
Vinyl chloride		2122					
		ND	0.080	0.010	ND	0.32	0.040
1,1-Dichloroethane			0.080	0.010 0.012	ND 0.094 J	0.32 0.44	0.040
1,1-Dichloroethane 1,1,1-Trichloroethane		ND					
1,1-Dichloroethane 1,1,1-Trichloroethane Trichloroethene	é	ND 0.017 J	0.080	0.012	0.094 J	0.44	0.065
Vinyl chloride 1,1-Dichloroethane 1,1,1-Trichloroethane Trichloroethene trans-1,2-Dichloroethen Tetrachloroethene	0	ND 0.017 J 0.041	0.080 0.040	0.012 0.014	0.094 J 0.22	0.44 0.21	0.065 0.075

CONTROL

LIMITS (%)

60 - 140

PERCENT

107

RECOVERY

Onalifiers

SURROGATE

4-Bromofluorobenzene

J Estimated result. Result is less than RL.

 $Result \ (ug/m3) = Result \ (ppb(v/v)) [unrounded] * (Molecular \ Weight/24.45)$

 $Reporting\ Limit\ (ug/m3) = Reporting\ Limit\ (ppb(v/v)) | unrounded| * (Molecular\ Weight/24.45)$

MDL (ug/m3) = MDL (ppb(v/v))|unrounded| * (Molecular Weight/24.45)

Client Sample ID: CUE0002-02

GC/MS Volatiles

Lot-Sample # H1E0)40525 - 002		Work Order #	MHWD91AA	Mati	rix AIR	
Prep Date:	04/29/2011 05/05/2011 1125343		Date Received: Analysis Time: Analysis Time: Method	05/04/2011 05/05/2011 14:17 TO-15			
PARAMETER		RESULTS (ppb(v/v))	REPORTING LIMIT (ppb(v/v))	MDL. (ppb(v/v))	RESULTS (ug/m3)	REPORTING LIMIT (ug/m3)	MDL (ug/m3)
1,1,2-Trichloroethane		ND	0.080	0.021	ND	0.44	0.11
Tetrachloroethene		0.023 J	0.080	0.016	0.16 J	0.54	0.11
trans-1,2-Dichloroethene		ND	0.080	0.020	ND	0.32	0.079
Trichloroethene		0.062	0.040	0.014	0.33	0.21	0.075
1,1,1-Trichloroethane		0.012 J	0.080	0.012	0.067 J	0.44	0.065
1,1-Dichloroethane		ND	0.080	0.010	ND	0.32	0.040
Vinyl chloride		ND	0.080	0.029	ND	0.20	0.074
1,1-Dichloroethene		ND	0.080	0.013	ND	0.32	0.052
cis-1,2-Dichloroethene		ND	0.080	0.024	ND	0,32	0.095
SURROGATE			PERCENT RECOVERY		CON	ORATORY ITROL ITS (%)	
4-Bromofluorobenzene			103		60 -	140	

Qualifiers

J Estimated result. Result is less than RL.

 $Result \ (ug/m3) = Result \ (ppb(v/v))[unrounded] \ * \ (Molecular \ Weight/24.45)$

Reporting Limit (ug/m3) = Reporting Limit (ppb(v/v))[unrounded] * (Molecular Weight/24.45)

 $\label{eq:mdl} \mathbf{MDL}\;(\mathbf{ug/m3}) = \mathbf{MDL}\;(\mathbf{ppb(v/v)})[\mathbf{uurounded}]\;\; \\ *\;(\mathbf{Molecular}\;\; \mathbf{Weight/24.45})$

Client Sample ID: CUE0002-03

Lot-Sample # H)	E040525 - 003		Work Order #	MHWEALAA	Mat	rix: AIR	
Date Sampled: Prep Date: Prep Batch #: Dilution Factor.:	04/29/2011 05/05/2011 1125343 5		Date Received: Analysis Time: Analysis Time: Method	05/04/2011 05/05/2011 11:39 TO-15			
PARAMETER		RESULTS (ppb(v/v))	REPORTING LIMIT (ppb(v/v))	MDL (ppb(v/v))	RESULTS (ug/m3)	REPORTING LIMIT (ug/m3)	MDL (ug/m3)
cis-1,2-Dichloroethene		ND	0.40	0.12	ND	1.6	0.48
1,1-Dichloroethene		ND	0.40	0.065	ND	1.6	0.26
Vinyl chloride		ND	0.40	0.14	ND	1.0	0.37
1,1-Dichloroethane		ND	0.40	0.050	ND	1,6	0.20
1,1,1-Trichloroethane		11	0.40	0.060	58	2,2	0,33
Trichlorgethene		11	0.20	0.070	61	1.1	0.38
rans-1,2-Dichloroothene		ND	0.40	0,10	ND	1.6	0.40
Tetrachloroethene		1.6	0.40	0.080	11	2.7	0.54
1,1,2-Trichloroethane		ND	0.40	0.10	ND	2.2	0.57
SURROGATE			PERCENT RECOVERY		COM	ORATORY (TROL (TS (%)	
4-Bremofluorobenzene			101		60 -	140	

Result (ug/m3) = Result (ppb(v/v))[unrounded] * (Molecular Weight/24.45)

 $Reporting \ Limit \ (ug/m3) = Reporting \ Limit \ (ppb(v/v))[unrounded] + (Molecular \ Weight/24.45)$

 $MDL\left(ug/m3\right)=MDL\left(ppb(v/v)\right)[unrounded]+(Molecular\ Weight/24.45)$

Client Sample ID: CUE0002-04

GC/MS Volatiles

Lot-Sample # H1	E040525 - 004		Work Order#	MHWEDIAA	Man	rix AIR	
Date Sampled: Prep Date: Prep Batch #:	04/29/2011 05/05/2011 1125343		Date Received: Analysis Time: Analysis Time:	05/04/2011 05/05/2011 15:10			
Dilution Factor.:	1		Method:	TO-15			
PARAMETER		RESULTS (ppb(v/v))	REPORTING LIMIT (ppb(v/v)	MDL (ppb(v/v))	KESUILTS (ug/m3)	REPORTING LIMIT (ug/m3)	MDL (ug/m3)
1,1,2-Trichloroethane		ND	0.080	0.021	ND	0.44	0.11
Fetrachloroethene		0.022 J	0.080	0.016	0.15 J	0.54	0.11
rans-1,2-Dichloroethene		ND	0.080	0.020	ND	0.32	0.079
Prichloroethene		0.078	0.040	0.014	0,42	0.21	0.075
1,1,1-Trichloroethane		0.017 J	0.080	0.012	0.094 3	0.44	0.065
,1-Dichloroethane		ND	0.080	0.010	ND	0.32	0.040
Vinyl chloride		ND	0.080	0.029	ND	0.20	0.074
,I-Dichloroothens		ND	0.080	0.013	ND	0.32	0.052
eis-1,2-Dichloroethene		ND	0.080	0.024	ND	0.32	0.095
SURROGATE			PERCENT RECOVERY		CON	ORATORY FIROL ITS (%)	
4-Bromofluorobenzene			102		60 -	140	

Qualifiers

J Estimated result. Result is less than RL.

Result (ug/m3) = Result (ppb(v/v))[unrounded] * (Motecular Weight/24.45)

 $Reporting \ Limit \ (ng/m3) = Reporting \ Limit \ (ppb(v/v)) [unrounded] * (Molecular \ Weight/24.45)$

MDL (ug/m3) = MDL (ppb(v/v))[uurounded] * (Molecular Weight/24.45)

Client Sample ID: CUE0002-05

GC/MS Volatiles

AIR	Matrix:	MHWERIAA	Work Order #	H1E040525 + 005	Lot-Sample #
		05/04/2011	Date Received:	04/29/2011	Date Sampled:
		05/05/2011	Analysis Time:	05/05/2011	Prep Date:
		16:05	Analysis Time:	1125343	Prep Batch #
		TO-15	Method	1	Dilution Factor.:
		27170		1	

PARAMETER	(ppb(v/v))	REPORTING LIMIT (ppb(v/v))	MDL (ppb(v/v))	RESULTS (ug/m3)	REPORTING LIMIT (ug/m3)	MDL (ug/m3)
cis-1,2-Dichloroethene	0,088	0.080	0.024	0.35	0.32	0,095
1,1-Dichloroethene	ND	0.080	0.013	ND	0.32	0.052
Vinyl chloride	ND	0.080	0.029	ND	0,20	0.074
1,1-Dichloroethane	ND	0.080	0.010	ND	0.32	0,040
1,1,1-Trichloroethane	0.016 J	0.080	0.012	0.087 J	0.44	0.065
Trichloroethene	0.19	0.040	0.014	1.0	0.21	0.075
trans-1,2-Dichloroethenn	ND	0.080	0.020	ND	0.32	0.079
Tetrachloroethene	0,039 J	0.080	0.016	0.26 J	0.54	0.11
1,1,2-Trichloroethane	ND	0.080	0.021	ND	0.44	0.11

LABORATORY PERCENT CONTROL SURROGATE RECOVERY LIMITS (%) 4-Bromofluorobenzene 105 60 - 140

Qualifiers

Estimated result. Result is less than RL.

Result (ug/m3) = Result (ppb(y/y))[unrounded] * (Molecular Weight/24.45)

 $Reporting \ Limit \ (ug/m3) = Reporting \ Limit \ (ppb(v/v))[unrounded] * (Molecular \ Weight/24.45)$

MDL (ug/m3) = MDL (ppb(v/v))[unrounded] * (Molecular Weight/24,45)

Client Sample ID: CUE0002-06

GC/MS Volutiles

Lot-Sample # H	11E040525 - 006		Work Order #	MHWET1AA	Mate	rix AIR	
Date Sampled: Prep Date: Prep Batch #: Dilution Factor.:	04/29/2011 05/05/2011 1125343		Date Received: Analysis Time: Analysis Time: Method	05/04/2011 05/05/2011 16:59 TO-15			
PARAMETER		RESULTS (ppb(v/v))	REPORTING LIMIT (ppb(v/v)	MDL (ppb(v/v))	RESULTS (ug/m3)	REPORTING LIMIT (ug/m3)	MDL (ug/m3)
1,1,2-Trichloroethane		ND	0.080	0.021	ND	0.44	0.11
Tetrachloroethene		0.028 J	0.080	0.016	0.19 J	0.54	0.11
runs-1,2-Dichloroethene	e	ND	0.080	0.020	ND	0.32	0.079
Trickloroethene		0.016 J	0.040	0.014	0.088 J	0.21	0.075
1,1,1-Trichloroethane		ND	0.080	0.012	ND	0.44	0.065
1,1-Dichloroethane		ND	0.080	0.010	ND	0.32	0.040
Vinyl chloride		ND	0.080	0.029	ND	0.20	0.074
1,1-Dichloroethene		ND	0.080	0.013	ND	0.32	0.052
cis-1,2-Dichloroethene		ND	0.080	0.024	ND	0.32	0.095
SURROGATE		T	PERCENT RECOVERY		CON	ORATORY STROL STS (%)	
4-Bromofluorobenzene			101		60 -	140	

Qualifiers

I Estimated result. Result is less than RL.

Readt (ug/m3) = Result (ppb(v/v)) [unrounded] * (Molecular Weight/24.45)

 $Reporting \ Limit \ (ug/m3) = Reporting \ Limit \ (ppb(v/v))[unrounded] * (Molecular \ Weight/24.45)$

MDL (ug/m3) = MDL (ppb(v/v))|unrounded| * (Molecular Weight/24.45)

Client Sample ID: CUE0002-07

GC/MS Volatiles

Lot-Sample# H1E	040525 - 007		Work Order #	MHWEW1AA	Mati	rix AIR	
Date Sampled: Prep Date: Prep Batch #: Dilution Factor.:	04/29/2011 05/05/2011 1125343 10		Date Received: Analysis Time: Analysis Time: Method	05/04/2011 05/05/2011 12:28 TO-15			
PARAMETER		RESULTS (ppb(v/v))	REPORTING LIMIT (ppb(v/v))	MDL (ppb(v/v))	RESULTS (ng/m3)	REPORTING LIMIT (ug/m3)	MDL (ug/m3)
cis-1,2-Dichloroethene		ND	0.80	0.24	ND	3.2	0.95
,1-Dichloroethene		ND	0.80	0.13	ND	3,2	0.52
/inyl chloride		ND	0.80	0,29	ND	2.0	0.74
t,1-Dichloroethane		0.16 J	0.80	0.10	0.65 J	3,2	0.40
1,1,1-Trichloroethane		9.7	0.80	0.12	53	4.4	0.65
Pricidoroethene		240 E	0.40	0.14	1300 E	2.1	0.75
rans-1,2-Dichloroethene		ND	0.80	0.20	ND	3.2	0.79
l'etrachloroethene		6.0	0.80	0.16	41	5,4	1.1
,1,2-Trichloroethane		ND	0.80	0.21	ND	4.4	Ed
SUKROGATE			PERCENT RECOVERY		CON	ORATORY ITROL ITS (%)	
4-Bromofluorobenzene			105		60 -	140	3

Qualiflers

H

Estimated result. Result concentration exceeds the calibration range.

J Bstimated result. Result is less than RL.

Result (ug/m3) = Result (ppb(v/v))[unrounded] * (Molecular Weight/24.45)

Reporting Limit (ug/m3) = Reporting Limit (ppb(v/v))[umrounded] $^{\circ}$ (Molecular Weight/24.45)

MDL (ug/m3) = MDL (ppb(v/v))[uurouuded] * (Molecular Weight/24.45)

Client Sample ID: CUE0002-07

GC/MS Volatiles

		3 740					
Crichloroethene		240 D	1,0	0.35	1300 D	5.4	1.9
ARAMETER		RESULTS (ppb(v/v))	REPORTING LIMIT (ppb(v/v))	MDL (ppb(v/v))	RESULTS (ug/m3)	REPORTING LIMIT (ug/m3)	MDL (ug/m3)
Prep Batch #; Dilution Factor.;	1125343 25		Analysis Time: Method:	03:00 TO-15			
Prep Date:	05/05/2011		Analysis Time:	05/06/2011			
Date Sampled:	04/29/2011		Date Received:	05/04/2011			
Lat-Sample #	H1E040525 - 007		Work Order#	MHWEW2AA	Matr	ix AIR	

Qualifiers

D Result was obtained from the analysis of a dilution.

Result (ug/m3) = Result (ppb(v/v))[unrounded] * (Molecular Weight/24.45)

 $Reporting \ Limit \ (og/m3) = Reporting \ Limit \ (ppb(v/v))[unrounded] * (Molecular \ Welght/24.45)$

MDL (ug/m3) = MDL (ppb(v/v))[unrounded] * (Molecular Weight/24.45)

Client Sample ID: CUE0002-08

Lot-Sample# H	E040525 - 008		Work Order#	MHWEXIAA	Mat	rlx AIR	
Date Sampled: Prep Date: Prep Batch #: Dilution Factor.:	04/29/2011 05/05/2011 1125343 1		Date Received: Analysis Time: Analysis Time: Method:	05/04/2011 05/05/2011 17:55 TO-15			
PARAMETER		RESULTS (ppb(v/v))	REPORTING LIMIT (ppb(v/v)	MDt. (opb(v/v))	RESULTS (ug/m3)	REPORTING LIMIT (ug/m3)	MDL (ng/m3)
Trichloroethene		0.61	0.040	0.014	3.3	0,21	0.075
1,1,1-Trichloroethane		0.71	0.080	0.012	3.9	0.44	0.065
1,1-Dichloroethane		ND	0.080	0.010	ND	0,32	0.040
Vinyl chloride		ND	0.080	0.029	ND	0.20	0.074
1,1-Dichloroethene		ND	0.080	0.013	ND	0.32	0.052
eis-1,2-Dichloroethene		ND	0.080	0.024	ND	0.32	0.095
1,1,2-Trichloroethane		ND	0.080	0.021	ND	0.44	0.11
l'etrachloroethene		4.1	0.080	0.016	28	0.54	0.11
trans-1,2-Dichloroethene		ND	0.080	0.020	ND	0.32	0.079
SURROGA'TE			PERCENT RECOVERY		CON	ORATORY STROL STS (%)	
4-Bromofluorobenzene			106		60 -	140	

Result (ug/m3) = Result (ppb(v/v))[unrounded] * (Molecular Weight/24.45)

Reporting Limit (ug/m3) = Reporting Limit (ppb(v/v))[unrounded] * (Molecular Weight/24,45)

 $MDL\ (ug/m3) = MDL\ (ppb(v/v)) \{uarounded\} * (Molecular\ Weight/24.45)$

Client Sample ID: CUE0002-09

GC/MS Volatiles

Lot-Sample# H	1E040525 - 009		Work Order #	MHWE01AA	Matr	rix AIR	
Date Sampled: Prep Date: Prep Batch #: Dilution Factor.:	04/29/2011 05/05/2011 1125343		Date Received: Analysis Time: Analysis Time: Method:	05/04/2011 05/05/2011 18:54 TO-15			
PARAMETER		RESULTS (ppb(v/v))	REPORTING LIMIT (ppb(v/v))	MDL (ppb(v/v))	RESULTS (ug/m3)	REPORTING LIMIT (ug/m3)	MDL (ug/m3)
trans-1,2-Dichloroether	ne	0.067.1	0.080	0.020	0.27 J	0.32	0.079
Tetrachloroethene		0.66	0.080	0.016	4.5	0.54	0.11
1,1,2-Trichloroethane		ND	0.080	0.021	ND	0.44	0.11
eis-1,2-Dichloroethene		ND	0.080	0.024	ND	0.32	0.095
1,1-Dichloroethene		ND	0.080	0.013	ND	0.32	0.052
Vinyl chloride		ND	0.080	0.029	ND	0.20	0.074
1,1-Dichloroethane		ND	0.080	0.010	ND	0.32	0.040
1,1,1-Trichloroethane		0.067 J	0.080	0.012	0.36 J	0.44	0.065
Trichloroethene		1.5	0.040	0.014	8.3	0.21	0.075
SURROGATE			PERCENT RECOVERY		CON	ORATORY ITROL ITS (%)	

102

60 - 140

Qualifiers

4-Bromofluorobenzene

J Estimated result. Result is less than RL.

Result (ug/m3) = Result (ppb(v/v))[unrounded] * (Molecular Weight/24.45)

 $Reporting\ Limit\ (ug/m3) = Reporting\ Limit\ (ppb(v/v))[unrounded] * (Molecular\ Weight/24.45)$

MDL (ug/m3) = MDL (ppb(v/v))[unrounded] * (Molecular Weight/24.45)

Matrix....

AIR

MHWE21AA

05/04/2011

05/05/2011

Analysis Time: Analysis Time: 19:50 TO-15

Work Order #

Date Received ..:

TestAmerica Cedar Falls Client Sample ID: CUE0002-10 GC/MS Volatiles

Prep Batch #: 1125343 Dilution Factor.: Method....:

H1E040525 - 010

04/29/2011

05/05/2011

PARAMETER	RESULTS (pph(v/v))	REPORTING LIMIT (ppb(v/v))	MDL (ppb(v/v))	RESULTS (ug/m3)	REPORTING LIMIT (ug/m3)	MDL (ug/m3)	
Trichloroethene	17 E	0.040	0.014	89 E	0.21	0.075	
1,1,1-Trichloroetliane	5.9	0.080	0.012	32	0.44	0.065	
trans-1,2-Dichloroethene	ND	0.080	0.020	ND	0.32	0.079	
1,1-Dichloroethane	ND	0.080	0,010	ND	0.32	0.040	
Vmyl chloride	ND	0.080	0,029	ND	0.20	0.074	
1,1-Dichloroethene	ND	0.080	0.013	ND	0.32	0.052	
eis-1,2-Dichloroethene	ND	0.080	0.024	ND	0.32	0.095	
1,1,2-Trichloroethane	ND	0.080	0.021	ND	0.44	0.11	
Tetrachloroethene	2.2	0.080	0.016	15	0.54	0.11	

LABORATORY PERCENT CONTROL. LIMITS (%) RECOVERY

4-Bromofluorobenzene

SURROGATE

Lot-Sample#

Date Sampled ...:

Prep Date

109

60 - 140

Qualifiers

Estimated result. Result concentration exceeds the calibration range.

Result (ug/m3) = Result (ppb(v/v))(unrounded) * (Molecular Weight/24,45)

Reporting Limit (ug/m3) = Reporting Limit (ppb(v/v))[unrounded] * (Molecular Weight/24.45)

MDL (ug/m3) = MDL (pph(v/v))|aurounded| * (Molecular Weight/24.45)

Client Sample ID: CUE0002-10

GC/MS Volatiles

SURROGATE	errie		PERCENT RECOVERY		CON	ORATORY FIROL FIS (%)	
Trichloroethene		15 D	0.10	0,035	81 D	0.54	0.19
PARAMETER		RESULTS (ppb(v/v))	REPORTING LIMIT (ppb(v/v)	MDL (ppb(v/v))	RESULTS (og/m3)	REPORTING LIMIT (ug/m3)	MDL (ug/m3)
Dilution Factor.:	2.5		Method	TO-15			
Prep Batch #:	1129093		Analysis Time:	21:15			
Prep Date:	05/06/2011		Analysis Time:	05/06/2011			
Date Sampled:	04/29/2011		Date Received:	05/04/2011			
Lot-Sample #	H1E040525 - 010		Work Order #	MHWE22AA	Mati	'ix AIR	

Qualifiers

D Result was obtained from the analysis of a dilution.

Result (ug/m3) = Result (ppb(v/v))[uarounded] * (Molecular Weight/24.45)

Reporting Limit (ug/m3) = Reporting Limit (ppb(v/v))[unrounded] * (Molecular Weight/24,45)

 $MDL\left(ug/m3\right) = MDL\left(ppb(v/v)\right)[unrounded] * (Molecular Weight/24.45)$

Client Sample ID: CUE0002-11

GC/MS Volatiles

Lot-Sample # H	HE040525 - 011		Work Order#	MHWE41AA	Mati	'ix	
Date Sampled: Prep Date: Prep Batch #: Dilution Factor.:	04/29/2011 05/05/2011 1125343		Date Received: Analysis Time; Analysis Time; Method;	05/04/2011 05/05/2011 20:43 TO-15			
PARAMETER		RESULTS (ppb(v/v))	REPORTING LIMIT (ppb(v/v))	MDL (ppb(v/v))	RESULTS (ug/n3)	REPORTING LIMIT (ug/m3)	MDL (ug/m3)
Trichloroethene		0.033 J	0.040	0.014	0.18 J	0.21	0.075
1,1,1-Trichloroethane		0.023 J	0.080	0.012	0.13 J	0.44	0.065
trans-1,2-Dichloroethene	e e	ND	0.080	0.020	ND	0.32	0.079
cis-1,2-Dichloroethene		ND	0.080	0.024	ND	0.32	0.095
1,1-Dichloroethene		ND	0.080	0.013	ND	0.32	0.052
Vlnyl chloride		ND	0.080	0.029	ND	0.20	0.074
1,1-Dichloroethane		ND	0.080	0.010	ND	0.32	0.040
Tetrachloroethene		0.26	0.080	0.016	1.7	0.54	0.11
1,1,2-Trichloroothane		ND	0.080	0.021	ND	0.44	0.11
SURROGATE			PERCEN'T RECOVERY		CON	ORATORY FIROL ITS (%)	
4-Bromofluorobenzene			104		60 -	140	

Ounliffers

I Estimated result. Result is less than RL.

 $Result \ (ug/m3) = Result \ (ppb(v/v)) \{unrounded\} \ ^* \ (Molecular \ Weight/24.45)$

Reporting Limit (ug/m3) = Reporting Limit (ppb(v/v))[narounded] * (Molecular Weight/24.45)

MDL (ug/m3) = MDL (ppb(v/v)) [unrounded] * (Molecular Weight/24.45)

4

TestAmerica Cedar Falls

Client Sample ID: CUE0002-12

GC/MS Volatiles

Lot-Sample #	H1E040525 - 012	Work Order#	MHWE51AA	Matrix	AIR
Date Sampled;	04/29/2011	Date Received:	05/04/2011		
Prep Date:	05/05/2011	Analysis Time:	05/05/2011		
Prep Batch #:	1125343	Analysis Time:	21:35		
Dilution Factor.:	1	Method:	TO-15		

PARAMETER	RESULTS (ppb(v/v))	REPORTING LIMIT (ppb(v/v))	MDL (ppb(v/v))	RESULTS (ug/m3)	REPORTING LIMIT (ug/m3)	MDL (ug/m3)
1,1,2-Trichloroethane	ND	0.080	0.021	ND	0.44	0.11
Tetrachloroethene	0.36	0.080	0.016	2.5	0.54	0.11
1,1-Dichloroethane	ND	0.080	0,010	ND	0.32	0.040
Vinyl chloride	ND	0.080	0,029	ND	0.20	0.074
1,1-Dichloroethene	ND	0.080	0.013	ND	0.32	0.052
cis-1,2-Dichloroethene	ND	0.080	0.024	ND	0.32	0.095
trans-1,2-Dichloroethens	ND	0.080	0.020	ND	0.32	0.079
1,1,1-Trichloroethane	0.023 J	0.080	0.012	0.12 J	0.44	0.065
Trichloroethene	0.036 J	0.040	0.014	0.20 J	0.21	0.075

SURROGATE	PERCENT RECOVERY	CONTROL LIMITS (%)
4-Bromofhiorobenzene	103	60 - 140

Onalifiers

J Estimated result. Result is less than RL.

 $Result \ (ug/m3) = Result \ (ppb(v/v)) [unrounded] \ * \ (Molecular \ Weight/24.45)$

 $Reporting \ Limit \ (ng/m3) = Reporting \ Limit \ (ppb(v/v))[norounded] * (Molecular \ Weight/24.45)$

MDL (ug/m3) = MDL (ppb(v/v))[unrounded] * (Molecular Weight/24.45)

Client Sample ID: CUE0002-13

GC/MS Volatiles

Lot-Sample # H	1B040525 - 013		Work Order#	MHWE61AA	Mat	rix AIR	
Date Sampled: Prep Date Prep Batch #: Dilution Factor.:	04/29/2011 05/05/2011 1125343		Date Received: Analysis Time: Analysis Time: Method	05/04/2011 05/05/2011 22;27 TO-15			
PARAMETER		RESULTS (ppb(v/v))	REPORTING LIMIT (ppb(v/v)	MDL (ppb(v/v))	RESULTS (ug/m3)	REPORTING LIMIT (ug/m3)	MDL (ug/m3)
Trichloroethene		0.030 J	0.040	0.014	0.16 J	0.21	0.075
1,1,1-Trichlorgethane		0.022 J	0.080	0.012	0.12 J	0.44	0,065
rans-1,2-Dichloroethene	2	ND	0.080	0.020	ND	0.32	0.079
eis-1,2-Dichloroethene		ND	0.080	0.024	ND	0.32	0.095
,1-Dichloroethene		ND	0.080	0.013	ND	0.32	0.052
Vinyl chloride		ND	0.080	0.029	ND	0.20	0.074
,1-Dichloroethane		ND	0.080	0.010	ND	0.32	0.040
1,1,2-Trichloroethane		ND	0.080	0.021	ND	0.44	0.11
l'etrachioroethene		0,10	0.080	0.016	0.69	0.54	0.11
SURROGATE			PERCENT RECOVERY		CON	ORATORY VIROL ITS (%)	
4-Bromofluorobenzene			103		60 -	140	

Qualifiers

J Estimated result. Result is less than RL.

Result (ug/m3) = Result (ppb(v/v))[uurounded] * (Molecular Weight/24.45)

 $Reporting\ Limit\ (ug/m3) = Reporting\ Limit\ (ppb(v/v))[uurounded]\ *\ (Molecular\ Weight/24.45)$

 $MDL \ (ug/m3) = MDL \ (ppb(v/v))[unrounded] * (Molecular \ Weight/24.45)$

Client Sample ID: CUE0002-14

GC/MS Volatiles

Lot-Sample #	H1E040525 - 014		Work Order #	MHWE81AA	Mat	rix AIR	
Date Sampled: Prep Date: Prep Batch #: Dilution Factor.:	04/29/2011 05/05/2011 1125343		Date Received: Analysis Time: Analysis Time:	05/04/2011 05/05/2011 23:20 TO-15			
PARAMETER		RESULTS (ppb(v/v))	REPORTING LIMIT (ppb(v/v)	MDL (ppb(v/v))	RESULTS (ug/m3)	REPORTING LJMIT (ug/m3)	MDL (ug/m3)
Tetrachloroethene		19 E	0.080	0.016	130 E	0.54	0.11
1,1,2-Trichloroethane		ND	0.080	0.021	ND	0.44	0.11
1,1-Dichloroethane		ND	0.080	0.010	ND	0.32	0.040
Vinyl chloride		ND	0.080	0.029	ND	0.20	0.074
1,1-Dichloroethene		ND	0.080	0.013	ND	0.32	0.052
cis-1,2-Dichloroethene		ND	0.080	0.024	ND	0.32	0.095
rans-1,2-Dichloroethe	ene	ND	0.080	0.020	ND	0.32	0.079
1,1,1-Trichloroethane	В	0.044 J	0.080	0.012	0.24 .1	0.44	0.065
Prichloroethene		0.015 J	0.040	0.014	0.080 J	0.21	0.075
SURROGATE			PERCENT RECOVERY		COL	BORATORY STROL IT'S (%)	
4-Bromofluorobenzen	е		102		60 -	140	

Qualifiers

B

Estimated result. Result concentration exceeds the calibration range.

J Estimated result, Result is less than RL.

 $Result \ (ug/m3) = Result \ (pph(v/v)) [unrounded] \ ^* \ (Molecular \ Weight/24.45)$

 $Reporting \ Limit \ (ug/m3) = Reporting \ Limit \ (ppb(v/v)) [unrounded] \ ^* \ (Molecular \ Weight/24.45)$

MDL (ug/m3) = MDL (ppb(v/v))[unrounded] * (Molecular Weight/24.45)

Client Sample ID: CUE0002-14

GC/MS Volatiles

Lot-Sample#	H1E040525 - 014		Work Order#	MHWE82AA	Mati	ix AIR	
Date Sampled: Prep Date: Prep Batch #: Dilution Factor.:	04/29/2011 05/06/2011 1129093 2.5		Date Received; Analysis Time: Analysis Time: Method	05/04/2011 05/07/2011 01:23 TO-15			
PARAMETER		RESULTS (ppb(v/v))	REPORTING LIMIT (ppb(v/v))	MDL (ppb(v/v))	RESULTS (ug/m3)	REPORTING LIMIT (ug/m3)	MDL (ug/m3)
Tetrachloroethene		20 D	0,20	0.040	130 D	1,4	0.27
SURROGATE			PERCENT RECOVERY		CON	ORATORY TROL ITS (%)	
4-Bromofluorobenze	ne	_	106		60 -	140	

Qualifiers

D Result was obtained from the analysis of a dilution.

Result (ug/m3) = Result (ppb(v/v))[unrounded] * (Molecular Weight/24.45)

Reporting Limit (ug/m3) = Reporting Limit (ppb(v/v))[unrounded] * (Molecular Weight/24.45)

MDL (ug/m3) = MDL (ppb(v/v))[unrounded] * (Molecular Weight/24,45)

Client Sample ID: CUE0002-15

GC/MS Volatiles

Lot-Sample # H	IE040525 - 015		Work Order#	MHWFC1AA	Matr	rix	
Date Sampled: Prep Date: Prep Batch #: Dilution Factor.:	04/29/2011 05/05/2011 1125343		Date Received: Analysis Time: Analysis Time: Method	05/04/2011 05/06/2011 00:14 TO-15			
PARAMETER		RESULTS (ppb(v/v))	REPORTING LIMIT (ppb(v/v))	MDL (ppb(v/v))	RESULTS (ug/m3)	REPORTING LIMIT (ug/m3)	MDL (ug/m3)
Tetrachloroethene		20 E	0.080	0.016	140 E	0.54	0.11
1,1,2-Trichloroethane		ND	0.080	0.021	ND	0.44	0.11
trans-1,2-Dichloroethene		ND	0.080	0.020	ND	0.32	0.079
Trichloroethene		0.096	0.040	0.014	0.52	0.21	0.075
1,1,1-Trichloroethane		0.048 J	0.080	0.012	0.26 J	0.44	0.065
cis-1,2-Dichloroethene		ND	0.080	0,024	ND	0.32	0.095
1,1-Dichloroethene		ND	0.080	0.013	ND	0.32	0.052
Vinyl chloride		ND	0.080	0.029	ND	0.20	0.074
1,1-Dichloroethane		ND	0.080	0.010	ND	0.32	0.040
SURROGATE			PERCENT RECOVERY		CON	ORATORY ITROL ITS (%)	

60 - 140

102

Qualifiers

4-Bromofluorobenzene

E Estimated result. Result concentration exceeds the calibration range.

J Estimated result. Result is less than RL.

 $Result \ (ug/m3) = Result \ (ppb(v/v)) [unrounded] * (Molecular \ Weight/24.45)$

 $Reporting \ Limit \ (ug/m3) = Reporting \ Limit \ (ppb(v/v))[uurounded] * (Molecular \ Weight/24.45)$

 $\mathbf{MDL}.(\mathbf{ug/m3}) = \mathbf{MDL}.(\mathbf{ppb}(\mathbf{v/v}))[\mathbf{unrounded}] * (\mathbf{Molecular}.\mathbf{Weight/24.45})$

Client Sample ID: CUE0002-15

GC/MS Volatiles

Tytrachloreethene		20 D	0.20	0.040	140 D	1.4	0.27
PARAMETER		RESULTS (ppb(v/v))	REPORTING LIMIT (ppb(v/v))	MDL (ppb(v/v))	RESULTS (ug/m3)	REPORTING LIMIT (ug/m3)	MDL (ng/m3)
Dilution Factor.:	2.5		Method	TO-15			
Prep Batch #:	1129093		Analysis Time:	02:13			
Prep Date:	05/06/2011		Analysis Time:	05/07/2011			
Date Sampled;	04/29/2011		Date Received:	05/04/2011			
Lot-Sample #	H1E040525 - 015		Work Order#	MHWFC2AA	Matr	ix: AIR	

Qualifiers

D Result was obtained from the analysis of a dilution.

Result (ug/u3) = Result (ppb(v/v))[unrounded] = (Molecular Weight/24.45)

 $Reporting \ Limit \ (ug/m3) = Reporting \ Limit \ (ppb(v/v))[unrounded] * (Molecular \ Weight/24.45)$

MDL (ug/m3) = MDL (ppb(y/y))[unrounded] * (Molecular Weight/24.45)

Client Sample ID: CUE0002-16

GC/MS Volatiles

Lot-Sample # H	1E040525 - 016		Work Order #	MHWFGIAA	Mat	rix AIR	
Date Sampled: Prep Date: Prep Batch #: Dilution Factor.:	04/29/2011 05/05/2011 1125343		Date Received: Analysis Time: Analysis Time: Method	05/04/2011 05/06/2011 03:54 TO-15			
PARAMETER		RESULTS (ppb(v/v))	REPORTING LIMIT (ppb(v/v)	MDL, (ppb(v/v))	RESULTS (ug/m3)	REPORTING LIMIT (ug/m3)	MDL (ug/m3)
Tetrachloroethene		0.25	0.080	0.016	1.7	0,54	0.11
1,1,2-Trichlorocthane		ND	0.080	0.021	ND	0.44	0.11
trans-1,2-Dichloroethene		ND	0.080	0.020	ND	0.32	0.079
1,1,1-Trichloroethane		0.048 J	0.080	0.012	0.26 J	0.44	0.065
Trichloroethene		0.025 J	0.040	0.014	0.14 J	0.21	0.075
1,1-Dichloroethane		ND	0.080	0.010	ND	0.32	0.040
Vinyl chloride		ND	0.080	0.029	ND	0.20	0.074
1,1-Dichloroethene		ND	0.080	0.013	ND	0.32	0.052
cis-1,2-Dichloroethene		ND	0.080	0,024	ND	0,32	0.095
SURROGATE			PERCENT RECOVERY		CON	ORATORY TROL ITS (%)	
4-Bromofinorobenzene			105		60 -	140	

Qualifiers.

J Hatimated result. Result is less than RL.

Result (ug/in3) = Result (ppb(v/v))[unrounded] * (Molecular Weight/24.45)

Reporting Limit (ug/m3) = Reporting Limit (ppb(v/v))[unrounded] * (Molecular Weight/24.45)

 $MDL\left(ug/m3\right) = MDL\left(ppb(v/v)\right)[unrounded] + (Molecular Weight/24.45)$

Client Sample ID: CUE0002-17

GC/MS Volatiles

Lut-Sample #	HE040525 - 017		Work Order#	MHWFJIAA	Mati	rix: AIR	
Date Sampled: Prep Date: Prep Batch #: Dilution Factor.:	04/29/2011 05/05/2011 1125343		Date Received: Analysis Time: Analysis Time: Method	05/04/2011 05/06/2011 02:08 TO-15			
PARAMETER		RESULTS (ppb(v/v))	REPORTING LIMIT (ppb(v/v)	MDI. (ppb(v/v))	RESULTS (ug/m3)	REPORTING LIMIT (ug/m³)	MDL (ug/m3)
cis-1,2-Dichloroethene		ND	0.080	0.024	ND	0.32	0.095
1,1-Dichloroethene		ND	0.080	0.013	ND	0.32	0.052
Vinyl chloride		ND	0.080	0.029	ND	0.20	0.074
1,1-Dichloroethane		ND	0.080	0.010	ND	0.32	0.040
Frichloroethene		0.021 J	0.040	0.014	0.11 J	0.21	0.075
I,I,I-Trichloroethane		0.036 J	0.080	0.012	0.20 J	0.44	0.065
rans-1,2-Dichloroethen	4	ND	0.080	0.020	ND	0.32	0.079
,1,2-Trichloroetlane		ND	0.080	0.021	ND	0.44	0.11
Tetrachloroethene		0.29	0.080	0.016	2.0	0,54	0.11
SURROGATE			PERCENT RECOVERY		CON	ORATORY TROL TTS (%)	
4-Bromofluorobenzene			102		60 -	140	

Qualiflers

J Estimated result. Result is less than RL.

 $\label{eq:Result (ug/m3) = Result (ppb(v/v))[unrounded] * (Molecular Weight/24.45)} \\$

Reporting Limit (ug/m3) = Reporting Limit (ppb(v/v))[uurounded] * (Molecular Weight/24.45)

MDL(ug/m3) = MDL(ppb(v/v))(uurounded) * (Molecular Weight/24.45)

Client Sample ID: CUE0002-18

Lot-Sample# H	IB040525 - 018		Work Order #	MHWFLIAA	Mat	rix AIR	
Date Sampled: Prep Date: Prep Batch #; Dilution Factor.:	04/29/2011 05/05/2011 1125343		Date Received: Analysis Time: Analysis Time: Method	05/04/2011 05/06/2011 04:47 TO-15			
ARAMETER		RESULTS (ppb(v/v))	REPORTING LIMIT (ppb(v/v))	MDL (ppb(v/v))	RESULT'S (ug/m3)	REPORTING LIMIT (ug/m3)	MDL (ug/m3)
etrachloroethene		0.43	0,080	0.016	2,9	0.54	0.11
1,2-Trichloroethane		ND	0.080	0.021	ND	0.44	0.11
ans-1,2-Dichloroethene		ND	0.080	0.020	ND	0.32	0.079
1,1-Trichloroethane		ND	0,080	0.012	ND	0.44	0.065
richloroethene		0.059	0.040	0.014	0.32	0.21	0.075
1-Dichloroethane		ND	0.080	0.010	ND	0,32	0.040
'inyl chloride		ND	0.080	0.029	ND	0.20	0.074
,I-Dichloroethene		ND	0.080	0.013	ND	0.32	0.052
is-1,2-Dichloroethene		ND	0.080	9.024	ND	0.32	0.095
BURROGATE			PERCENT RECOVERY		000	BORATORY VIROL ITS (%)	
-Bromofluorobcuzene			103		60 -	140	

Result (ug/m3) = Result (ppb(v/v)) [unrounded] * (Molecular Weight/24.45)

 $Reporting \ Limit \ (ug/m3) = Reporting \ Limit \ (ppb(v/v)) [unrounded] * (Molecular \ Weight/24.45)$

MDL (ug/m3) = MDL (ppb(v/v)) | unrounded] * (Molecular Weight/24.45)

Lot-Sample # H1E040525 - 019 Work Order # MHWFQ1AA Matrix......: AIR

 Date Sampled...:
 04/29/2011
 Date Received...
 05/04/2011

 Prep Date........:
 05/05/2011
 Analysis Time....
 05/06/2011

 Prep Batch #.....:
 1125343
 Analysis Time.....
 05:41

 Dilution Factor.:
 1
 Method.............
 TO-15

PARAMETER	RESULTS (ppb(v/v))	REPORTING LIMIT (ppb(v/v))	MDL (ppb(v/v))	RESULTS (ug/m3)	REPORTING LIMIT (ug/m3)	MDL (ug/m3)
cis-1,2-Dichloroethene	ND	0.080	0.024	ND	0.32	0.095
1,1-Dichloroethene	ND	0.080	0.013	ND	0.32	0.052
Vinyl chloride	ND	0.080	0.029	ND	0.20	0.074
1,1-Dichloroethane	ND	0.080	0.010	ND	0,32	0.040
Trichloroethene	0.16	0.040	0.014	0.86	0.21	0.075
1,1,1-Trichloroethane	0.020 J	0.080	0.012	0.11 J	0.44	0.065
trans-1,2-Dichloroethene	ND	0.080	0.020	ND	0.32	0.079
1,1,2-Trichloroethane	ND	0.080	0.021	ND	0.44	0.11
Tetrachloroethene	0.15	0.080	0.016	0.99	0.54	0.11

PERCENT CONTROL
SURROGATE RECOVERY LIMITS (%)

4-Bromofluorobenzene 102 60 - 140

Qualifiers

Estimated result. Result is less than RL.

 $Result \left(ug/m3\right) = Result \left(ppb(v/v)\right) \left[unrounded\right] * \left(Molecular Weight/24.45\right)$

 $Reporting \ Limit \ (ug/m3) = Reporting \ Limit \ (ppb(v/v))[uarounded] \ ^{*} \ (Molecular \ Weight/24.45)$

 $\label{eq:mdl} MDL\left(ug/m3\right) = MDL\left(ppb(y/y)\right)[unrounded] * (Mølecular Weight/24.45)$

Client Sample ID: CUE0002-20

Lot-Sample #	H1E040525 - 020		Work Order#	MHWFWIAA	Mati	rix: AJR	
Date Sampled: Prep Date Prep Batch #: Dilution Factor.;	04/29/2011 05/05/2011 1125343 1		Date Received: Analysis Time: Analysis Time: Method	05/04/2011 05/06/2011 06:34 TO-15			
PARAMETER		RESULTS (ppb(v/v))	REPORTING LIMIT (ppb(v/v))	MDL (ppb(v/v))	RESULTS (ug/m3)	REPORTING LIMIT (ug/m3)	MDL (ug/m3)
Tetrachloroethene		0.14	0.080	0.016	0.93	0,54	0.11
1,1,2-Trichloroethane		ND	0.080	0.021	ND	0.44	0.11
trans-1,2-Dichloroethe	ne	ND	0.080	0.020	ND	0.32	0.079
1,1,1-Trichloroethane		ND	0.080	0.012	ND	0.44	0.065
Trichloroethene		ND	0.040	0.014	ND	0.21	0.075
1,1-Dichloroethane		ND	0,080	0.010	ND	0.32	0.040
Vinyl chloride		ND	0,080	0.029	ND	0.20	0.074
1,1-Dichloroethene		ND	0.080	0.013	ND	0.32	0.052
cis-1,2-Dichloroethene		ND	0.080	0.024	ND	0.32	0.095
SURROCIATE			PERCENT RECOVERY		CON	ORATORY ITROL ITS (%)	
4-Bromofluorobenzene	3		101		60 -	140	

Result (ug/m3) = Result (ppb(v/v))[unrounded] * (Molecular Weight/24.45)

 $Reporting \ Limit \ (ug/m3) = Reporting \ Limit \ (ppb(v/v)) [unrounded] * (Molecular \ Weight/24.45)$

MDL (ug/m3) = MDL (ppb(v/v))[unrounded] * (Molecular Weight/24,45)

Client Sample ID: INTRA-LAB BLANK

M	Date Received: Analysis Time: Analysis Time: Method	05/04/2011 05/05/2011 10:50 TO-15			
RESULTS (ppb(v/v))	REPORTING LIMIT (ppb(v/v))	MDL (ppb(v/vi)	RESULTS (ug/m3)	REPORTING LIMIT (ug/m3)	MDL (ug/m3)
ND	0,080	0.013	ND	0.32	0.052
ND	0.080	0.029	ND	0.20	0.074
ND	0.080	0.010	ND	0.32	0,040
ND	0.080	0.012	ND	0.44	0.065
ND	0.040	0.014	ND	0.21	0.075
ND	0.080	0.020	ND	0.32	0.079
ND	0.080	0.024	ND	0.32	0.095
ND	0.080	0.021	ND	0.44	0.11
ND	0.080	0.016	ND	0.54	0.11
	PERCENT RECOVERY		CON	TROL	
	(ppb(v/v)) ND	Date Received: Analysis Time: Analysis Time: Method: Method: RESULTS REPORTING LIMIT (ppb(v/v)) ND 0,080 ND 0,080 ND 0,080 ND 0,080 ND 0,040 ND 0,080 ND 0,080	Date Received: 05/04/2011	Date Received: 05/04/2011 Analysis Time: 05/05/2011 Analysis Time: 10:50 Method: TO-15 RESULTS REPORTING MDL (ppb(v/v)) (ug/m3) ND 0,080 0.013 ND ND ND ND ND ND ND N	Date Received: 05/04/2011 Analysis Time: 05/05/2011 Analysis Time: 10:50 Method: TO-15 RESULTS (ppb(y/y)) LIMIT (ppb(y/y)) (ppb(y/y)) (ug/m3) LIMIT (ug/m3) LIMIT (ug/m3) LIMIT (ug/m3) LIMIT (ug/m3) LIMIT (ug/m3) ND

Result (ug/m3) = Result (ppb(v/v))[unrounded] * (Molecular Weight/24.45)

 $Reporting\ Limit\ (pph(v/v))[uarounded]\ *\ (Molecular\ Weight/24.45)$

 $MDL\left(\mu g/m3\right) = MDL\left(ppb(v/v)\right)|uurounded] * (Molecular Weight/24.45)$

Client Sample ID: CHECK SAMPLE

Lot-Sample#	H1E050000 - 343C		Work Order#	MH0T11AC		Matrix	ATR
Prep Date: Prep Batch #: Dilution Factor.;	04/29/2011 05/05/2011 1125343 1	SPIKE AMOUNT (ppb(v/v))	Date Received: Analysis Time: Analysis Time: Method: MEASURED AMOUNT (ppb(v/v))	05/04/2011 05/05/2011 08:40 TO-15 SPIKE AMOUNT (ug/m3)	MEASURED AMOUNT (ug/m3)	PERCENT RECOVERY	RECOVERY LIMITS
l'etrachloroethene		5.00	4.94	33,9	33.5	99	70 - 130
,1,2-Trichloroethane		5,00	5.10	27.3	27.8	102	70 - 130
rans-1,2-Dichloroethe	ene	5.00	5.39	19.8	21.4	108	70 - 130
1,1,1-Trichloroethane		5.00	5.49	27.3	30.0	110	70 - 130
Prichloroethene		5.00	4.90	26.9	26.3	98	70 - 130
,1-Dichloroethane		5,00	5.36	20.2	21.7	107	70 - 130
Vinyl chloride		5,00	5.54	12.8	14.2	111	70 - 130
1,1-Dichloroethene		5.00	5.48	19.8	21.7	110	70 - 130
is-1,2-Dichloroethene		5,00	5.35	19.8	21.2	107	70 - 130
SURROGATE			PERCENT RECOVERY			LABORATORY CONTROL LIMITS (%)	
4-Bromofluorobenzene	e		102			60 - 140	

Result (ug/m3) = Result (ppb(v/v))[unrounded] * (Molecular Weight/24.45)

 $Reporting \ Limit \ (ug/m3) = Reporting \ Limit \ (ppb(v/v))[unrounded] \ * \ (Molecular \ Weight/24.45)$

 $MDL\ (ug/m3) = MDL\ (ppb(v/v))[unrounded] * (Molecular\ Weight/24.45)$

Client Sample ID: INTRA-LAB BLANK

Lot-Sample#	H1E090000 - 093B		Work Order#	MH4F01AA	Mate	dx: AIR	
Prep Date: Prep Batch #: Dilution Factor.:	04/29/2011 05/06/2011 11/29093		Date Received: Analysis Time: Analysis Time: Method	05/04/2011 05/06/2011 13:00 TO-15			
PARAMETER		RESULTS (ppb(v/v))	REPORTING LIMIT (ppb(v/v)	MDL. (ppb(v/v))	RESULTS (ug/m3)	REPORTING LIMIT (ug/m3)	MDL (ug/m3)
Trichloroethene		ND	0.040	0.014	ND	0.21	0,075
Tetrachloroethene		ND	0.080	0.016	ND	0.54	0.11
SURROGATE			PERCENT RECOVERY		CON	ORATORY ITROL ITS (%)	
4-Bromofluorobenze	ne		107		60 -	140	-

Result (ug/m3) = Result (ppb(v/v))[unrounded] * (Molecular Weight/24.45)

Reporting Limit (ug/m3) = Reporting Limit (ppb(v/v))[unrounded] * (Molecular Weight/24.45)

 $MDL\left(ug/m3\right)=MDL\left(ppb(v/v)\right)|unrounded|*\left(Materular\ Weight/24.45\right)$

Client Sample ID: CHECK SAMPLE

Lot-Sample#	H1E090000 - 093C		Work Order#	MH4F01AC	1	Matrix:	AIR
Prep Date: Prep Batch #: Dilution Factor.:	04/29/2011 05/06/2011 1129093		Date Received: Analysis Time: Analysis Time: Method	05/04/2011 05/06/2011 09:35 TO-15			
PARAMETER		SPIKE AMOUNT (ppb(v/v))	MEASURED AMOUNT (ppb(y/v))	SPIKE AMOUNT (ug/m3)	MEASURED AMOUNT (ug/m3)	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloroethene	- 3	5.00	4.76	33.9	32.3	95	70 - 130
Prichloroethene		5.00	4.97	26,9	26.7	99	70 - 130
SURROGATE			PERCENT RECOVERY			LABORATORY CONTROL LIMITS (%)	
4-Bromofluorobenze	ne		104			60 - 140	

 $Result \ (ug/m3) = Result \ (ppb(v/v)) [unrounded] \ * \ (Molecular \ Weight/24.45)$

Reporting Limit (ug/m3) = Reporting Limit (ppb(v/v))[unrounded] * (Molecular Weight/24.45)

MDL (ug/m3) = MDL (ppb(v/v)) [unrounded] * (Molecular Weight/24.45)

SENDING LABORATORY:

TestAmerica Cedar Falls 704 Enterprise Drive Cedar Falls, IA 50613 Phone: 800-750-2401

Fax: 319-277-2425

Project Manager: Brian C. Graettinger

RECEIVING LABORATORY:

TestAmerica Knoxville 5815 Middlebrook Pike Knoxville, TN 37921 Phone:(865) 291-3000

Fax: -

Analysis	Due	Expires	Comments
		Air Volume	
Sample ID: CUE0002-01 Air	Sampled: 04/29/11 08:04	(in L):	12543 w/K431
AIR - Summa Canister Rental	05/16/11 12:00	09/13/38 08:04	
AIR - VOC Scan (TO-15)	05/16/11 12:00	07/28/11 08:04	
AIR - Flow Controller Rental	05/16/11 12:00	02/10/85 08:04	
		Air Volume	244 7544
Sample ID: CUE0002-02 / Air	Sampled: 04/29/11 08:13	(in L):	0112 w/K392
AIR - Flow Controller Rental	05/16/11 12:00	02/10/85 08:13	
AIR - Summa Canister Rental	05/16/11 12:00	09/13/38 08:13	
AIR - VOC Scan (TO-15)	05/16/11 12:00	07/28/11 08:13	
Sample ID: CUE0002-03 , Air	Sampled: 04/29/11 08:50	Air Volume (în L):	12345
AIR - Summa Canister Rental	05/16/11 12:00	09/13/38 08:50	
AIR - VOC Scan (TO-15)	05/16/11 12:00	07/28/11 08:50	
AIR - Flow Controller Rental	05/16/11 12:00	02/10/85 08:50	
Sample ID: CUE0002-04 / Air	Sampled: 04/29/11 14:50	Air Volume (in L):	04391 w/K423
			A boxes With Custody St Received @ ambient year R. H 5/4/11
AIR - Summa Canister Rental	05/16/11 12:00	09/13/38 14:50	a a single
AIR - VOC Scan (TO-15)	05/16/11 12:00	07/28/11 14:50	perend a ambient year
AIR - Flow Controller Rental	05/16/11 12:00	02/10/85 14:50	R.A 5/4/11
			4 bx Fex Ex 4208270776
Doll.			420827077138,42082707709
12 West	- 5/2/11		20 CANS 19 FLOWS (10 F 9R)
Released By	Date	Received By) Date
		Kita Han	MACK 5/4/11 09:45

SUBCONTRACT ORDER

TestAmerica Cedar Falls CUE0002

HIEDHDSAS

Analysis	Due	Expires	Comments	
	Air	Volume		
Sample ID: CUE0002-05 - Air	Sampled: 04/29/11 14:52	(fn L):	12340 w/K236	
AIR - VOC Scan (TO-15)	05/16/11 12:00	07/28/11 14:52		
AIR - Flow Controller Rental	05/16/11 12:00	02/10/85 14:52		
AIR - Summa Canister Rental	05/16/11 12:00	09/13/38 14:52		
Committee ID. CHURANA AC. A fin		Volume	12266 :::////199	
Sample ID: CUE0002-06 Air >	Sampled: 04/29/11 14:59	(in L):	12266 w/K188	-
AIR - VOC Scan (TO-15)	05/16/11 12:00	07/28/11 14:59		
AIR - Flow Controller Rental	05/16/11 12:00	02/10/85 14:59		
AIR - Summa Canister Rental	05/16/11 12:00	09/13/38 14:59		
Sample ID: CUE0002-07 Air	Sampled: 04/29/11 09:46	Volume	1410 w/19	
Sample ID: COE0002-07 Air	Sampled: 04/29/11 09:40	(in L):	1410 W/19	
AIR - Flow Controller Rental	05/16/11 12:00	02/10/85 09:46		
AIR - Summa Canister Rental	05/16/11 12:00	09/13/38 09:46		
AIR - VOC Scan (TO-15)	05/16/11 12:00	07/28/11 09:46		
County ID. CHIERONS AND Alm	Sampled: 04/20/11 10:50	Volume	04750 w/150	
Sample ID: CUE0002-08 Air	Sampled: 04/29/11 10:50	(in L);	04750 W/150	-
AIR - Flow Controller Rental	05/16/11 12:00	02/10/85 10:50		
AIR - Summa Canister Rental	05/16/11 12:00	09/13/38 10:50		
AIR - VOC Scan (TO-15)	05/16/11 12:00	07/28/11 10:50		
Sample ID; CUE0002-09 Air /	Sampled: 04/29/11 11:50	· Volume	12820 w/198	
Sample ID; CUE0002-09 Air /	Sampleu: 04/29/11 11:50	(in L);	12020 W/170	
AIR - Flow Controller Rental	05/16/11 12:00	02/10/85 11:50		
AIR - Summa Canister Rental	05/16/11 12:00	09/13/38 11:50		
AIR - VOC Scan (TO-15)	05/16/11 12:00	07/28/11 11:50		

B. Chart
Released By

5/2/11 Date

Received By

Date

Released By

Date

Received By Jansock

5/4/11 Date

09:45

SUBCONTRACT ORDER

TestAmerica Cedar Falls CUE0002

HIE040 Sas

Analysis	Due	Expires	Comments	
a a market	Ali	Volume		
Sample ID: CUE0002-10 Air_	Sampled: 04/29/11 12:50	(in L):	1013 w/138	
AIR - Summa Canister Rental	05/16/11 12:00	09/13/38 12:50		
AIR - Flow Controller Rental	05/16/11 12:00	02/10/85 12:50		
AIR - VOC Scan (TO-15)	05/16/11 12:00	07/28/11 12:50		
Sample ID: CUE0002-11 Air	Sampled: 04/29/11 15:22	Volume	1495 w/K406	
Sample ID: CUE0002-11 Air	Sampled: 04/29/11 15:22	(in L):	1495 W/K400	
AIR - Summa Canister Rental	05/16/11 12:00	09/13/38 15:22		
AIR - VOC Scan (TO-15)	05/16/11 12:00	07/28/11 15:22		
AIR - Flow Controller Rental	05/16/11 12:00	02/10/85 15:22		
Complete Chippens 12	Samuel I Barrages as Ali	Volume	11127 1/2/2	
Sample ID: CUE0002-12 Air ,	Sampled: 04/29/11 15:22	(in L):	11157 w/K362	
AIR - Flow Controller Rental	05/16/11 12:00	02/10/85 15:22		
AIR - Summa Canister Rental	05/16/11 12:00	09/13/38 15:22		
AIR - VOC Scan (TO-15)	05/16/11 12:00	07/28/11 15:22		
un terese tamundi su l	Air	Volume		
Sample ID: CUE0002-13 / Air	Sampled: 04/29/11 15:25	(in L);	0120 w/K270	
AIR - Summa Canister Rental	05/16/11 12:00	09/13/38 15:25		
AIR - VOC Scan (TO-15)	05/16/11 12:00	07/28/11 15:25		
AIR - Flow Controller Rental	05/16/11 12:00	02/10/85 15:25		
Sample ID: CUE0002-14 Air,	Sampled: 04/29/11 13:57	Volume	S-1530 w/10	
ommpre in: COE0002-14 Air,	Sampleu: 04/29/11 13:37	(in L):	2-1330 W/10	
AIR - Summa Canister Rental	05/16/11 12:00	09/13/38 13:57		
AIR - VOC Scan (TO-15)	05/16/11 12:00	07/28/11 13:57		
AIR - Flow Controller Rental	05/16/11 12:00	02/10/85 13:57		

Released By

Received By

Date

09:45

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6

SUBCONTRACT ORDER

TestAmerica Cedar Falls CUE0002

141E040525

Due	Expires	Comments
Air V	olume	0.000
Sampled: 04/29/11 13:57	(in L):	92042 w/71
05/16/11 12:00	07/28/11 13:57	
05/16/11 12:00	02/10/85 13:57	
05/16/11 12:00	09/13/38 13:57	
		1011 auto
Sampled: 04/29/11 16:02	(in L):	1426 w/K484
05/16/11 12:00	07/28/11 16:02	
05/16/11 12:00	02/10/85 16:02	
05/16/11 12:00	09/13/38 16:02	
		man a salah
Sampled: 04/29/11 16:05	(in L):	1407 w/K137
05/16/11 12:00	02/10/85 16:05	
05/16/11 12:00	09/13/38 16:05	
05/16/11 12:00	07/28/11 16:05	
Air V	'olume	
Sampled: 04/29/11 15:19	(in L):	6386 w/11
05/16/11 12:00	02/10/85 15:19	
05/16/11 12:00	09/13/38 15:19	
05/16/11 12:00	07/28/11 15:19	
		11146 w/EE
Sampled: 04/29/11 10:30	(in L):	11146 w/55
05/16/11 12:00	02/10/85 16:30	
05115111 12 00	09/13/38 16:30	
05/16/11 12:00	02.01 06.00	
	Sampled: 04/29/11 13:57 O5/16/11 12:00	Sampled: 04/29/11 13:57 05/16/11 12:00

Released By Date

Released By Date

Received By

Reta Hanrock

Date 5/4/11

09:45

Page 4 of 5

CUE0002

141ED4DS25

Analysis	Due	Expires	Comments	
Sample ID: CUE0002-20 Air	Sampled: 04/29/11 16:55	ir Volume (іл L.):	1119	
AIR - VOC Scan (TO-15)	05/16/11 12:00	07/28/11 16:55		
AIR - Flow Controller Rental	05/16/11 12:00	02/10/85 16:55		
AIR - Summa Canister Rental	05/16/11 12:00	09/13/38 16:55		

B. C. Sheeth 5/2/1.
Released By Date

Released By Date

Received By
Rich Hans nel

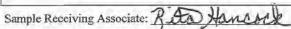
Date 5/4/11 Date

09:45

Page 5 of 5

TESTAMERICA KNOXVILLE SAMPLE RECEIPT/CONDITION UPON RECEIPT ANOMALY CHECKLIST Lot Number: 145140585

Review Items	Yes	No	NA	If No, what was the problem?	Comments/Actions Taken
Do sample container labels match COC? (IDs, Dates, Times)	×			☐ 1a Do not match COC ☐ 1b Incomplete information ☐ 1c Marking smeared ☐ 1d Label torn ☐ 1e No label ☐ 1f COC not received ☐ 1g Other:	
 Is the cooler temperature within limits? (> freezing temp. of water to 6 °C, VOST: 10 °C) 			X	☐ 2a Temp Blank = ☐ 2b Cooler Temp = ☐ 2c Cooling initiated for recently collected samples, ice present.	
 Were samples received with correct chemical preservative (excluding Encore)? 			X	☐ 3a Sample preservative =	
4. Were custody seals present/intact on cooler and/or containers?	X			☐ 4a Not present ☐ 4b Not intact ☐ 4c Other:	
5. Were all of the samples listed on the COC received?	X			☐ 5a Samples received-not on COC ☐ 5b Samples not received-on COC ☐	
6. Were all of the sample containers received intact?	X			☐ 6a Leaking ————————————————————————————————————	
7. Were VOA samples received without headspace?			X	☐ 7a Headspace (VOA only)	
. Were samples received in appropriate containers?	X		15	☐ 8a Improper container	
. Did you check for residual chlorine, if necessary?			X	□ 9a Could not be determined due to matrix interference	
Were samples received within holding time?	X			☐ 10a Holding time expired	
 For rad samples, was sample activity info. provided? 			×	☐ Incomplete information	
2. For 1613B water samples is pH<9?			X	If no, was pH adjusted to pH 7 - 9 with sulfuric acid?	
3. Are the shipping containers intact?	X			☐ 13a Leaking ————————————————————————————————————	
4. Was COC relinquished? (Signed/Dated/Timed)	X	>=	25	☐ 14a Not relinquished	
5. Are tests/parameters listed for each sample?	X		7	☐ 15a Incomplete information	
6. Is the matrix of the samples noted?	X			☐ 15a Incomplete information	-
7. Is the date/time of sample collection noted?	X			☐ 15a Incomplete information	
8. Is the client and project name/# identified?	X			☐ 15a Incomplete information	
9. Was the sampler identified on the COC?	170	X			



QA026R22.doc, 012811

Test America - Knoxville ---- Air Canister Dilution Log Lot Number: <u>H1E040525</u>

				Initial Can Pressu	re								Sul	sequent I	Dilutions	S			
Analys	t/Date	Tedlar Bag Time	Pbarr (in)	Sample ID	Can#	Pres. upon receipt (-in or + psig)	Adj. Initial Pres. (- in or + psig)	Analyst/Date	1 / 5	Pbarr (in)	Initial Pres. Pi (in)	Final Pres. Pf (psig)	First InCan Final Pres. Pf (psig)	Second In-can Final Pres. Pf (psig)	Third InCan Final Pres. Pf (psig)	Serial Dilution Can#	Vol (mL)	Final Pres Pf (psig)	Comments
45	Julu	NA	39.14	MHWD6	12543	0.0													992
				MHWD9	0112	-0.5													9154
	JE.			MHWEA	12345	-1.9													9182
				MHWED	04391	-1.0													952
				MHWER	12340	-1.0													919Y
				MHWET	12266	-0.8													9195
				MHWEW	1410	-1.7													9196
				MHWEX	04750	-2.2													-
				MHWE0	12820	-1.0													9162
			1	MHWE2	1013	-2.6													1177
				MHWE4	1495	-3.4													9159
				MHWE5	11157	-1.9													9152
				MHWE6	0120	3.9													1
				MHWE8	S1530	-19													าเช3
				MHWFC	92042	-1.7													9193
				MHWFG	1426	-3.9													9195
				MHWFJ	1407	-3.0													9152
				MHWFL	6386	1.6-													9197
				MHWFQ	11146	-2.5													
	2	-	-	MHWFW	1119	0.0													-

5815 Middlebrook Pike Knoxville, TN 37921 phone 865-291-3000 fax 865-584-4315

Canister Samples Chain of Custody Record

TestAmerica

TestAmerica assumes no liability with respect to the collection and shipment of these samples.

THE LEADER IN ENVIRONMENTAL TESTING

Client Contact Information	Project Man	ager: W	hun bri	meyer	,	Sampled By:	mc/th	Jym	e			1	of_	4	coc	s			1
Company: TEPRACON Address: 870 4040 Ave City/State/Zip Retardorf, IA 52722 Phone: 563.355.0702	Phone: 54 Site Contac TAL Contac		20405 14	levval	ion.com		0 0	3					saction)						section)
FAX: 543.395.4789								L											es se
Project Name: Chamberlau Vaper Turbustor			Turnarou	nd Time	_		(X)	UKI					in notes						n not
Site/location: PO# PROJECT # 07107020	1	tandard (Spec Rush (Spec						10000					pacify						pecify i
Sample Identification	Sample Date(s)	Time Start	Time Stop	Canister Vacuum in Field, "Hg (Start)	Canister Vacuum in Field, 'Hg (Stop)	Flow Controller	Canïster ID	TO-15 LOW	TO-14A	EPA 3C	EPA 25C	ASTM D-1946	Other (Please specify	Sample Type	Indoor Air	Amblent Air	Soil Gas	Landfill Gas	Other (Please specify in notes
IA-33-B	4/28-4/20	810	804	-29	-1.5	K431	12543	X				57							
14.33-1	4/28-4/29	820	813	729	-2.5	K392	0112	V											
88.33	4/29	810	850	-29	-2.5	-	12345												
1A-4-B	4/28-4/79		1450	-29	-2	L423	04391							÷ (i. (
14-4-1	4/28-4/29	-	1452	-36	-3	K234	12340									13			
AA-4	4/28-4/29	929	1459	-30	-1.5	K188	12246	V											
Sampled by :				Temperatur	e (Fahrenhei	1)													_
jendaneny		Interior		Ambient														-	
Justin en wall Justin	Start	720		40-6															
Justin en will fish ou	Stop	720	F	40-60	JUF													3	
/-				Pressure (in	iches of Hg)														
		Interior		Ambient							_					- 2			
	Start																_		
	Stop					1													
Special Instructions/QC Requirements & Comment	est Au	EPA	To-15	lon b	lls in	individ	require	1											
Canisters Shipped by:	Date/Time:					Received by:	1		_										
Samples Relinquished by	Date/Time:	11170			Received Tusi Received	by: Ehuall	_												
Relinguished by Justino Horman	Date/Time:	ou/ l	730		Received	No.	4/29/11	173	0										

5815 Middlebrook Pike Knoxville, TN 37921 phone 865-291-3000 fax 865-584-4315

Canister Samples Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica assumes no liability with respect to the collection and shipment of these samples.

Client Contact Information	Project Mar Phone: Su	nager: XV	un boyu	never		Sampled By:	ma life	lin	rie			2	of_		coc	s			
Company: Tel/vacon Address: 8 to 40th Ave City/State/Zip Bottenday F, IA 62722 Phone: 563.355.435	TAL Contac	ct:	Los Upl	imelylur@ jev	Valori-cov			3					section)	10.75					section)
FAX: 543.355.4381 Project Name: Chamberlain Vapor Intrustring	60	tandard (S)		nd Time				+m					olfy in notes						oify in notes
Sample Identification	Sample Date(s)	Rush (Spec	Time Stop	Canister Vacuum In Field, "Hg (Start)	Canister Vacuum in Field, 'Hg (Stop)	Flow Controller	Canister ID	TO-15 LAW LAMENT	TO-14A	EPA 3C	EPA 25C	ASTM D-1946	Other (Please specify in notes section)	Sample Type	Indoor Air	Ambient Air	Soil Gas	Landfill Gas	Other (Please specify in notes section)
SS-4	4/29	-2820	946	-28	-1.5	19	1410	X											
SS-37	4/29	1016	1050	-29	-2.5	150	04780	1										H	
55-20	4129	1141	1150	-28.5	-2.5	198	12820			-	7 =			1177		in !	1		
55-48	4/29	1215	1250	-28	-2.5	138	1013											TE	
1A-48-B	4/28.4/29	1218	1522	-24,5	-5	x does jour	1495			Ы	19			10 K. K.					
1A 48-B-D	4/28.4/29	_	1522	-29	-3	K362	11157	1					4	1012 (a)	(EI)		П		
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Reliquished by Level Horacon	Date/Time:	12011	1730		Received	by:	9/20/4	1	730										





5815 Middlebrook Pike Knoxville, TN 37921 phone 865-291-3000 fax 865-584-4315

Canister Samples Chain of Custody Record

TestAmerica

TestAmerica assumes no liability with respect to the collection and shipment of these samples.

THE LEADER IN ENVIRONMENTAL TESTING

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Sample Date(s)	Time Start	Time Stop	Canister Vacuum in Field, "Hg (Start)	Canister Vacuum In Field, 'Hg (Stop)	Flow Controller	Canister ID		TO-14A	EPA 3C	EPA 25C	ASTM D-1946	Other (Please	Sample Typ	Indoor Air	Ambient Air	Soil Gas	Landfill Gas
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5815 Middlebrook Pike Knoxville, TN 37921 phone 865-291-3000 fax 865-584-4315

Canister Samples Chain of Custody Record

TestAmerica

TestAmerica assumes no liability with respect to the collection and shipment of these samples.

THE LEADER IN ENVIRONMENTAL TESTING

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IH Sample Receipt Form

City: Bettenbort	Proje	
Date: <u>4/29/11</u>	Receiver's Initials:)MH	_ Time (Delivered): _ /730
COC Completed Correct (Cite inconsistencies below) Sample Checklist (Check ind		Couriers
Received Broken	Information Missing	
Improper Media	Missing Sample	UPS TA Courier
Missing Label	Sample Past Hold Date	FedEx TA Field Services
Temperature	Extra Sample	FedEx Ground Client
COC Discrepancy	Insufficient Sample Volume	USPS Other
Other:		Spee-Dee
	Date 4 5/2/11	Spee-Dee Samples Not Received in a Cooler Temperature Not Taken

H:\QA Folder\QA Forms & Log Book pgs\IH Cooler Receipt Rev 7.doc



THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc. TestAmerica Cedar Falls 704 Enterprise Drive Cedar Falls, IA 50613 Tel: 800-750-2401

TestAmerica Job ID: CUE0116

Client Project/Site: Chamberlain Vapor Sampling

Client Project Description: TO-15 Scans

For:

TERRACON - BETTENDORF 870 40th Avenue Bettendorf, IA 52722

Attn: John Brimeyer

Authorized for release by: 05/17/2011 12:41:02 PM

Brian C. Graettinger
Operations Manager
brian.graettinger@testamericainc.com

LINKS

Review your project results through

Total Access

Have a Question?



Visit us at: www.testamericainc.com This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Case Narrative

Client: TERRACON - BETTENDORF Project/Site: Chamberlain Vapor Sampling TestAmerica Job ID: CUE0116

Job ID: CUE0116

Narrative

Laboratory: TestAmerica Cedar Falls

Analyzed by TestAmerica - Knoxville, TN.

Sample Summary

Client: TERRACON - BETTENDORF Project/Site: Chamberlain Vapor Sampling TestAmerica Job ID: CUE0116

9

3

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
CUE0116-01	SS-15	Air	05/02/11 11:50	05/03/11 17:40
CUE0116-02	SS-10	Air	05/02/11 14:26	05/03/11 17:40
CUE0116-03	SS-62	Air	05/02/11 16:36	05/03/11 17:40
CUE0116-04	SS-46	Air	05/03/11 11:07	05/03/11 17:40
CUE0116-05	1A-B-46	Air	05/03/11 10:15	05/03/11 17:40
CUE0116-06	1A-1-46	Air	05/03/11 11:52	05/03/11 17:40
CUE0116-07	AA-46	Air	05/03/11 11:17	05/03/11 17:40
CUE0116-08	1A-1-40	Air	05/03/11 12:09	05/03/11 17:40
CUE0116-09	1A-1B-40	Air	05/03/11 15:24	05/03/11 17:40
CUE0116-10	AA-40	Air	05/03/11 15:24	05/03/11 17:40
CUE0116-11	AAD-40	Air	05/03/11 15:24	05/03/11 17:40
CUE0116-12	SS-40	Air	05/03/11 12:53	05/03/11 17:40
CUE0116-13	SS-45	Air	05/03/11 16:28	05/03/11 17:40
CUE0116-14	1A-1-45	Air	05/03/11 15:37	05/03/11 17:40
CUE0116-15	1A-B-45	Air	05/03/11 16:33	05/03/11 17:40
CUE0116-16	Equipment Blank	Air	05/03/11 16:55	05/03/11 17:40

Client: TERRACON - BETTENDORF

Project/Site: Chamberlain Vapor Sampling

Client Sample ID: SS-15 Lab Sample ID: CUE0116-01

Date Collected: 05/02/11 11:50 Date Received: 05/03/11 17:40

Matrix: Air

Method: EPA TO-15 - Air Sample Analysis - Subcontract

Result Qualifier Analyte MDL Unit RL D Analyst Analyzed Dil Fac See 0.10 BCG 05/10/11 14:11 Volatile Organic Compounds mg Attached

Report.

Client Sample ID: SS-10 Lab Sample ID: CUE0116-02

Date Collected: 05/02/11 14:26

Date Received: 05/03/11 17:40

Matrix: Air

Method: EPA TO-15 - Air Sample Analysis - Subcontract Analyte Result Qualifier RL MDL Unit D Analyst Analyzed Dil Fac Volatile Organic Compounds See 0.10 BCG 05/10/11 15:03 mg Attached

Report.

Client Sample ID: SS-62 Lab Sample ID: CUE0116-03

Date Collected: 05/02/11 16:36

Date Received: 05/03/11 17:40

Matrix: Air

Method: EPA TO-15 - Air Sample Analysis - Subcontract

Result Qualifier RL Dil Fac Analyst Analyzed Volatile Organic Compounds See 0.10 BCG 05/10/11 15:57 1.0 ma Attached

Report

Client Sample ID: SS-46 Lab Sample ID: CUE0116-04

Date Collected: 05/03/11 11:07

Date Received: 05/03/11 17:40

Matrix: Air

Method: EPA TO-15 - Air Sample Analysis - Subcontract Analyte Result Qualifier RL MDL Unit D Analyst Analyzed Dil Fac BCG 05/10/11 12:33 Volatile Organic Compounds See 0.10 mg 10

Attached Report

Client Sample ID: 1A-B-46 Lab Sample ID: CUE0116-05

Date Collected: 05/03/11 10:15

Date Received: 05/03/11 17:40

Matrix: Air

Method: EPA TO-15 - Air Sample Analysis - Subcontract

Result Qualifier Analyte RL MDL Unit D Analyst Analyzed Dil Fac See Volatile Organic Compounds BCG 0.10 mg 05/10/11 16:49 1.0

Attached Report

Lab Sample ID: CUE0116-06 Client Sample ID: 1A-1-46

Date Collected: 05/03/11 11:52 Matrix: Air Date Received: 05/03/11 17:40

Method: EPA TO-15 - Air Sample Analysis - Subcontract

Analyte Result Qualifier RL MOL Unit D Analyst Analyzed Dil Fac Volatile Organic Compounds See 0.10 mg BCG 05/10/11 17:41 1.0 Attached

Report.

Client: TERRACON - BETTENDORF

Project/Site: Chamberlain Vapor Sampling

Client Sample ID: AA-46 Date Collected: 05/03/11 11:17 Lab Sample ID: CUE0116-07

Matrix: Air

Date Received: 05/03/11 17:40

Method: EPA TO-15 - Air Samp	le Analysis - Su	bcontract							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Analyst	Analyzed	Dil Fac
Volatile Organic Compounds	See		0.10		mg	E	BCG	05/10/11 18:35	1.0
100000000000000000000000000000000000000	Attached								

Report.

Client Sample ID: 1A-1-40 Date Collected: 05/03/11 12:09

Lab Sample ID: CUE0116-08

Matrix: Air

Date Received: 05/03/11 17:40

Analyte	Result	Qualifier	RL	MDL	Unit	D	Analyst	Analyzed	Dil Fac
Volatile Organic Compounds	See	-	0.10		mg		BCG	05/10/11 19:26	1.0
	Attached								
	Report.								

Client Sample ID: 1A-1B-40 Date Collected: 05/03/11 15:24 Lab Sample ID: CUE0116-09

Matrix: Air

Date Received: 05/03/11 17:40

Analyte	Result Qualifier	RL	MDL	Unit	D	Analyst	Analyzed	Dil Fac
Volatile Organic Compounds	See	0.10		mg		BCG	05/10/11 20:15	1.0

Client Sample ID: AA-40

Lab Sample ID: CUE0116-10

Matrix: Air

Date Collected: 05/03/11 15:24 Date Received: 05/03/11 17:40

Analyte	Result	Qualifier	RL	MDL	Unit	D	Analyst	Analyzed	Dil Fac
Volatile Organic Compounds	See		0.10		mg		BCG	05/10/11 21:05	1.0
	Attached								
	Report.								

Client Sample ID: AAD-40

Lab Sample ID: CUE0116-11

Matrix: Air

Date Collected: 05/03/11 15:24 Date Received: 05/03/11 17:40

Analyte	Result	Qualifier	RL	MDL	Unit	D	Analyst	Analyzed	Dil Fac
Volatile Organic Compounds	See		0.10		mg	77	BCG	05/10/11 21:57	1.0
	Attached								
	Report								

Client Sample ID: SS-40

Lab Sample ID: CUE0116-12

Matrix: Air

Date Collected: 05/03/11 12:53 Date Received: 05/03/11 17:40

Analyte	Result	Qualifier	RL	MDL	Unit	D	Analyst	Analyzed	Dil Fac
Volatile Organic Compounds	See		0.10		mg		BCG	05/10/11 13:22	1.0
A TO STAN OF THE PROPERTY OF THE PARTY OF TH	Attached				200.00				
	Report.								

Client: TERRACON - BETTENDORF

Project/Site: Chamberlain Vapor Sampling

Client Sample ID: SS-45 Lab Sample ID: CUE0116-13 Date Collected: 05/03/11 16:28

Matrix: Air

Date Received: 05/03/11 17:40

Method: EPA TO-15 - Air Sample Analysis - Subcontract Result Qualifier Analyte RL MDL Unit Dil Fac D Analyst Analyzed 0.10 Volatile Organic Compounds See BCG 05/10/11 11:47 mg Attached

Report.

Report.

Report.

Client Sample ID: 1A-1-45 Lab Sample ID: CUE0116-14

Date Collected: 05/03/11 15:37 Matrix: Air

Date Received: 05/03/11 17:40

Method: EPA TO-15 - Air Sample Analysis - Subcontract Result Qualifier Analyte RL MDL Unit D Analyst Analyzed Dil Fac Volatile Organic Compounds See 0.10 05/10/11 22:48 mg Attached Report.

Client Sample ID: 1A-B-45 Lab Sample ID: CUE0116-15 Date Collected: 05/03/11 16:33 Matrix: Air

Date Received: 05/03/11 17:40

Method: EPA TO-15 - Air Sample Analysis - Subcontract Dil Fac Result Qualifier RL Analyst Analyzed Volatile Organic Compounds See 0.10 BCG 05/10/11 23:40 1.0 mg Attached

Client Sample ID: Equipment Blank

Lab Sample ID: CUE0116-16 Date Collected: 05/03/11 16:55

Date Received: 05/03/11 17:40

Method: EPA TO-15 - Air Sample Analysis - Subcontract Result Qualifier Analyte RL MDL Unit D Analyst Analyzed Dil Fac Volatile Organic Compounds See 0.10 BCG 05/11/11 02:12 1.0 mg Attached

Matrix: Air

H1E060660 Analytical Report	1
Sample Receipt Documentation	24
Total Number of Pages	33



TestAmerica Laboratories, Inc.

ANALYTICAL REPORT

PROJECT NO. CUE0116

Terracon

Lot #: H1E060660

Brian Graettinger

TestAmerica Cedar Falls 704 Enterprise Drive Cedar Falls, IA 50613-0625

TESTAMERICA LABORATORIES, INC.

Jamie A. McKinney Project Manager

May 13, 2011

ANALYTICAL METHODS SUMMARY

H1E060660

PARAMET	ER	ANALYTICAL METHOD	
Volatil	e Organics by TO15	EPA-2 TO-15	
Referen	ces;		
EPA-2	"Compendium of Methods for the Dete Organic Compounds in Ambient Air", January 1999.		

SAMPLE SUMMARY

H1E060660

WO # S	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
мнз рм	001	CUE0116-01	05/02/11	11:50
MH3PR	002	CUE0116-02	05/02/11	14:26
MH3PT	003	CUB0116-03	05/02/11	16:36
MH3 PV	004	CUE0116-04	05/03/11	11:07
MH3PW	005	CUE0116-05	05/03/11	10:15
мнзрх	006	CUE0116-06	05/03/11	11:52
MH3P0	007	CUE0116-07	05/03/11	11:17
мнзр2	008	CUE0116-08	05/03/11	12:09
МНЗРЗ	009	CUE0116-09	05/03/11	15:24
MH3P5	010	CUE0116-10	05/03/11	15:24
MH3 P6	011	CUE0116-11	05/03/11	15:24
МНЗР7	012	CUE0116-12	05/03/11	12:53
MH3 P9	013	CUE0116-13	05/03/11	
мнзоа	014	CUE0116-14	05/03/11	15:37
MH3QC	015	CUE0116-15	05/03/11	16:33
MH3QD	016	CUE0116-16	05/03/11	

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, perosity pressure, reactivity, reflex potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

PROJECT NARRATIVE H1E060660

The results reported herein are applicable to the samples submitted for analysis only. If you have any questions about this report, please call (865) 291-3000 to speak with the TestAmerica project manager listed on the cover page.

This report shall not be reproduced except in full, without the written approval of the laboratory.

The original chain of custody documentation is included with this report.

Sample Receipt

There were no problems with the condition of the samples received.

Quality Control and Data Interpretation

Unless otherwise noted, all holding times and QC criteria were met and the test results shown in this report meet all applicable NELAC requirements.

EPA methods TO-14A and TO-15 specify the use of humidified "zero air" as the blank reagent for canister cleaning, instrument calibration and sample analysis. Ultra-high purity humidified nitrogen from a cryogenic reservoir is used in place of "zero air" by TestAmerica Knoxville.

The concentration of trichloroethene in sample CUE0116-13 exceeded the calibration level of the instrument. The sample was analyzed at a dilution to bring the concentration of the compound into the instrument calibration range. The results for both analyses are reported in order to provide the lowest possible reporting limits.

TestAmerica Knoxville maintains the following certifications, approvals and accreditations: Arkansas DEQ Lab #88-0688, California DHS ELAP Cert. #2423, Colorado DPHE, Connecticut DPH Lab #PH-0223, Florida DOH Lab #E87177, Georgia DNR Lab #906, Hawaii DOH, Illinois EPA Lab #200012, Indiana DOH Lab #C-TN-02, Iowa DNR Lab #375, Kansas DHE Cert. #E-10349, Kentucky DEP Lab #90101, Louisiana DEQ Cert. #03079, Louisiana DOHH, Maryland DOE Cert. #277, Michigan DEQ Lab #9933, Nevada DEP, New Jersey DEP Lab #TN001, New York DOH Lab #10781, North Carolina DPH Lab #21705, North Carolina DEHNR Cert. #64, Ohlo EPA VAP Lab #CL0059, Oklahoma DEQ Lab #9415, Pennsylvania DEP Lab #68-00576, South Carolina DHEC Cert #84001001, Tennessee DOH Lab #02014, Texas CEQ, Utah DOH Lab # QUAN3, Virginia DGS Lab #00165, Washington DOE Lab #C1314, West Virginia DEP Cert. #345, West Virginia DHHR Cert #9955C, Wisconsin DNR Lab #998044300, Naval Facilities Engineering Service Center and USDA Soil Permit #S-46424. This list of approvals is subject to change and does not imply that laboratory certification is available for all parameters reported in this environmental sample data report.

Client Sample ID: CUE0116-01

Lot-Sample# HII	E060660 - 001		Work Order#	MH3PM1AA	Mate	rix: AIR	
Date Sampled: Prep Date: Prep Batch #,: Dilution Factor.:	05/02/2011 05/10/2011 1130245 1		Date Received,.: Analysis Time: Analysis Time: Method	05/06/2011 05/10/2011 14:11 TO-15			
PARAMETER		RESULTS (ppb(v/v))	REPORTING LIMIT (ppb(v/v))	MDL (ppb(v/v))	RESULTS (ug/m3)	REPORTING LIMIT (ug/m3)	MDL (ug/m3)
cis-1,2-Dichloroethene		ND	0.080	0.024	ND	0.32	0.095
1,1-Dichloroethene		ND	0.080	0.013	ND	0.32	0.052
Vinyl chloride		ND	0.080	0.029	ND	0.20	0.074
1,1-Dichloroethane		ND	0.080	0.010	ND	0.32	0.040
1,1,1-Trichloroethane		0.10	0.080	0.012	0.56	0.44	0.065
Frichloroethene		0.068	0.040	0.014	0.36	0.21	0.075
rans-1,2-Dichloroethene		ND	0.080	0.020	ND	0,32	0.079
Fetrachloroethene		0.28	0.080	0.016	1.9	0.54	0.11
1,1,2-Trichloroethane		ND	0.080	0.021	ND	0.44	0.11
SURROGATE			PERCENT RECOVERY		CON	ORATORY TROL ITS (%)	
4-Bromofluorobenzene			83		60 -	140	-

 $Result \ (ug/m3) = Result \ (ppb(v/v)) [unrounded] \ * (Molecular \ Weight/24.45)$

Reporting Limit (ug/m3) = Reporting Limit (pph(v/v))[unrounded] * (Molecular Weight/24,45)

MDL (ug/m3) = MDL (ppb(v/v))[nurounded] * (Molecular Weight/24.45)

Client Sample ID: CUE0116-02

Lot-Sample#	H1E060660 - 002		Work Order#	MH3PR1AA	Mati	rix: AIR	
Date Sampled: Prep Date: Prep Batch #: Dilution Factor,:	05/02/2011 05/10/2011 1130245		Date Received; Analysis Time; Analysis Time; Method	05/06/2011 05/10/2011 15:03 TO-15			
PARAMETER		RESULTS (ppb(v/v))	REPORTING LIMIT (ppb(v/v)	MDL (ppb(v/v))	RESULTS (ug/m3)	REPORTING LIMIT (ug/m3)	MDL (ug/m3)
1,1,2-Trichloroethane		ND	0.080	0.021	ND	0.44	0.11
Tetrachloroethene		0.11	0.080	0.016	0.76	0.54	0.11
trans-1,2-Dichloroeth	ene	ND	0.080	0.020	ND	0.32	0.079
Trichloroethene		ND	0.040	0.014	ND	0,21	0.075
1,1,1-Trichloroethane		ND	0.080	0.012	ND	0,44	0.065
1,1-Dichloroethane		ND	0.080	0.010	ND	0.32	0.040
Vinyl chloride		ND	0.080	0.029	ND	0.20	0.074
1,1-Dichloroethene		ND	0.080	0.013	ND	0.32	0.052
cis-1,2-Dichloroethen	e	ND	0.080	0.024	ND	0.32	0.095
SURRŌQA TE			PERCENT RECOVERY		CON	ORATORY ITROL ITS (%)	
4-Bromofluorobenzen	ne		82		60 -	140	

Result (ug/m3) = Result (ppb(v/v))[unrounded] * (Molecular Weight/24.45)

Reporting Limit (ug/m3) = Reporting Limit (ppb(v/v))[unrounded] * (Molecular Weight/24.45)

MDL (ug/m3) = MDL (ppb(v/v))[unrounded] * (Molecular Weight/24.45)

Client Sample ID: CUE0116-03

Lot-Sample # H	1E060660 - 003		Work Order #	MH3PT1AA	Mat	rix: AIR	
Date Sampled: Prep Date Prep Batch # Dilution Factor.:	05/02/2011 05/10/2011 1130245 1		Date Received; Analysis Time; Analysis Time; Method;	05/06/2011 05/10/2011 15:57 TO-15			
PARAMETER		RESULTS (ppb(v/v))	REPORTING LIMIT (ppb(v/y))	MDL (ppb(v/v))	RESULTS (ug/m3)	REPORTING LIMIT (ug/m3)	MDL (ug/m3)
cis-1,2-Dichloraethene		ND	0.080	0.024	ND	0.32	0.095
1,1-Dichloroethene		ND	0.080	0.013	ND	0.32	0.052
Vinyl chloride		ND	0.080	0.029	ND	0.20	0.074
1,1-Dichloroethane		ND	0,080	0.010	ND.	0.32	0.040
1,1,1-Trichloroethane		0.26	0.080	0.012	1.4	0.44	0.065
Trichloroothene		ND	0.040	0.014	ND	0.21	0.075
trans-1,2-Dichloroethene	2	ND	0.080	0.020	ND	0.32	0.079
Tetrachloroethene		0.11	0.080	0.016	0.77	0.54	0.11
1,1,2-Trichloroethane		ND	0.080	0.021	ND	0.44	0.11
SURROGATE			PERCENT RECOVERY		CON	ORATORY TROL ITS (%)	
4-Bromofluorobenzene			83		60 -	140	-

Result (ug/m3) = Result (ppb(v/v))[unrounded] * (Molecular Weight/24.45)

Reporting Limit (ug/m3) = Reporting Limit (ppb(v/v))[unrounded] * (Molecular Weight/24.45)

MDL $(ng/m3) = MDL (ppb(v/v))[unrounded] \pm (Molecular Weight/24.45)$

Client Sample ID: CUE0116-04

Lot-Sample# H	1E060660 - 004		Work Order#	MH3PV1AA	Mat	rix: AIR	
Date Sampled; Prep Date; Prep Batch #; Dilution Factor.;	05/03/2011 05/10/2011 1130245 25		Date Received: Analysis Time: Analysis Time: Method:	05/06/2011 05/10/2011 12:33 TO-15			
PARAMETER		RESULTS (ppb(v/v))	REPORTING LIMIT (ppb(v/v)	MDL (ppb(v/v))	RESULTS (ug/m3)	REPORTING LIMIT (ug/m3)	MDL (ug/m3)
1,1,2-Trichloroethane		ND	2.0	0.52	ND	11	2.9
Tetrachloroethene		4.3	2.0	0.40	29	14	2.7
trans-1,2-Dichloroethen	2	ND	2.0	0,50	ND	7.9	2.0
Trichloroethene		210	1.0	0.35	1100	5.4	1.9
1,1,1-Trichloroethane		2.4	2.0	0.30	13	11	1.6
1,1-Dichloroethane		ND	2.0	0.25	ND	8.1	1.0
Vinyl chloride		ND	2.0	0.72	ND	5.1	1.9
1,1-Dichloroethene		ND	2.0	0.32	ND	7.9	1.3
cis-1,2-Dichloroethene		ND	2.0	0.60	ND	7.9	2.4
SURROGATE			PERCENT RECOVERY		CON	ORATORY ITROL ITS (%)	
4-Bromofluorobenzene			80		60 -	140	

Result (ug/m3) = Result (ppb(v/v))[unrounded] * (Molecular Weight/24.45)

Reporting Limit (ug/m3) = Reporting Limit (ppb(v/v))[unrounded] * (Molecular Weight/24.45)

MDL (ug/m3) = MDL (ppb(v/v))[unrounded] * (Molecular Weight/24.45)

Client Sample ID: CUE0116-05

GC/MS Volatiles

Lot-Sample#	H1E060660 - 005		Work Order#	MH3PWIAA	Mati	rix AIR	
Date Sampled: Prep Date: Prep Batch #: Dilution Factor.:	05/03/2011 05/10/2011 1130245		Date Received: Analysis Time: Analysis Time: Method:	05/06/2011 05/10/2011 16:49 TO-15			
PARAMETER		RESULTS (ppb(v/v))	REPORTING LIMIT (ppb(v/v)	MDL (ppb(v/v))	RESULTS (ug/m3)	REPORTING LIMIT (ug/m3)	MDL (ug/m3)
cis-1,2-Dichloroethen	10	ND	0.080	0,024	ND	0,32	0.095
1,1-Dichloroethene		ND	0.080	0.013	ND	0.32	0.052
Vinyl chloride		ND	0.080	0.029	ND	0,20	0.074
1,1-Dichloroethane		ND	0.080	0.010	ND	0.32	0.040
1,1,1-Trichloroethane	i:	ND	0.080	0.012	ND	0.44	0.065
Frichloroethene		0.16	0.040	0.014	0.86	0.21	0.075
rans-1,2-Dichloroeth	ene	ND	0.080	0.020	ND	0.32	0.079
Tetrachloroethene		0.043 J	0.080	0.016	0.29 J	0,54	0.11
1,1,2-Trichloroethane	š.	ND	0.080	0.021	ND	0.44	0.11
SURROGATE			PERCENT RECOVERY		CON	ORATORY (TROL (TS(%)	
4-Bromofluorobenzen	ne		83		60 -	140	

Qualifiers

Estumated result. Result is less than RL..

Result (ug/m3) = Result (ppb(v/v))[unrounded] * (Molecular Welght/24.45)

 $Reporting\ Limit\ (ug/m3) = Reporting\ Limit\ (ppb(v/v))[unrounded] = (Molecular\ Weight/24.45)$

 $MDL\ (ug/m3) = MDL\ (ppb(v/v))[umrounded] * (Molecular Weight/24.45)$

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Client Sample ID: CUE0116-06

GC/MS Volatiles

AIR H1E060660 - 006 Work Order # MH3PX1AA Matrix....: Lot-Sample # Date Sampled ...: Date Received ..: 05/06/2011 05/03/2011 05/10/2011 Analysis Time: Prep Date: 05/10/2011 Prep Batch #: 1130245 Analysis Time: 17:41 Dilution Factor.; 1 Method....: TO-15 RESULTS REPORTING MDL RESULTS REPORTING MDL PARAMETER LIMIT (ppb(v/v)) LIMIT (ug/in3) (ug/m3) (ppb(v/v))(ppb(v/v))(ug/m3) 1,1,2-Trichloroethane ND 0.080 0.021 ND 0.44 0.11 0.080 0.016 0.54 0.11 Tetrachloroethene 0.11 0.75 ND 0.080 0.020 ND 0.32 0.079 trans-1,2-Dichloroethene Trichloroethene 0.23 0.040 0.014 1.2 0.21 0.075 0.22 0.080 0.012 0.44 0.065 1,1,1-Trichloroethane 1,2 ND 0.010 ND 0,32 0.040 1,1-Dichloroethane 0.080 ND 0.029 ND 0.20 0.074 Vinyl chloride 0.080 ND 0.013 ND 0.32 0.052 1,1-Dichloroethene 0.080

0.024

ND

SURROGATE

4-Bromofluorobenzene

cis-1,2-Dichloroethene

PERCENT RECOVERY

0.080

81

ND

LABORATORY CONTROL LIMITS (%)

0.32

0.095

60 - 140

Result (ug/m3) = Result (ppb(v/v))[unrounded] * (Moiecular Weight/24.45)

Reporting Limit (ug/m3) = Reporting Limit (ppb(v/v))[unrounded] * (Molecular Weight/24.45)

MPL (ug/m3) = MDL (ppb(v/v))[unrounded] * (Molecular Weight/24.45)

Client Sample ID: CUE0116-07

Lot-Sample # H1	E060660 - 007		Work Order#	MH3P01AA	Mati	rix AIR	
Date Sampled: Prep Date: Prep Batch #: Dilution Factor.:	05/03/2011 05/10/2011 1130245 1		Date Received: Analysis Time; Analysis Time; Method	05/06/2011 05/10/2011 18:35 TO-15			
PARAMETER		RESULTS (ppb(v/v))	REPORTING LIMIT (ppb(v/v))	MDL (ppb(v/v))	RESULTS (ug/m3)	REPORTING LIMIT (ug/m3)	MDL (ug/m3)
cis-1,2-Dichloroethene		ND	0.080	0.024	ND	0.32	0.095
,1-Dichloroethene		ND	0.080	0.013	ND	0.32	0.052
/inyl chloride		ND	0.080	0.029	ND	0.20	0,074
,1-Dichloroethane		ND	0.080	0.010	ND	0.32	0.040
,1,1-Trichloroethane		ND	0.080	0.012	ND	0.44	0.065
richloroethene		ND	0.040	0.014	ND	0.21	0.075
rans-1,2-Dichloroethene		ND	0.080	0.020	ND	0,32	0.079
'etrachloroethene		ND	0.080	0.016	ND	0.54	0.11
,1,2-Trichloroethane		ND	0.030	0,021	ND	0.44	0.11
SURROGATE			PERCENT RECOVERY		CON	ORATORY ITROL ITS (%)	
-Bromofluorobenzene			84		60 -	140	

Result (ng/m3) = Result (ppb(v/v))[umrounded] * (Molecular Weight/24,45)

 $Reporting\ Limit\ (ug/m3) = Reporting\ Limit\ (ppb(v/v))[unrounded]\ ^*\ (Molecular\ Weight/24.45)$

MDL (ug/m3) = MDL (ppb(v/v))[uurounded] * (Molecular Weight/24.45)

Client Sample ID: CUE0116-08

GC/MS Volatiles

Lot-Sample#	H1B060660 - 008		Work Order#	MH3P2TAA	Mat	rix AIR	
Date Sampled: Prep Date: Prep Batch #: Dilution Factor.:	05/03/2011 05/10/2011 1130245		Date Received: Analysis Time: Analysis Time: Method:	05/06/2011 05/10/2011 19:26 TO-15			
PARAMETER		RESULTS (ppb(v/v))	REPORTING LIMIT (ppb(v/v))	MDE (ppb(v/v))	RESULTS (ug/m3)	REPORTING LIMIT (ug/m3)	MDL (ug/m3)
1,1,2-Trichloroethane		ND	0.080	0.021	ND	0.44	0.11
Tetrachloroethene		ND	0.080	0.016	ND	0.54	0.11
trans-1,2-Dichloroethe	ene	ND	0.080	0.020	ND	0.32	0.079
Trichloroethene		0.033 J	0.040	0.014	0.18 J	0.21	0.075
1,1,1-Trichloroethane		ND	0.080	0.012	ND	0.44	0.065
1,1-Dichloroethane		ND	0.080	0.010	ND	0.32	0.040
Vinyi chloride		ND	0.080	0.029	ND	0.20	0.074
1,1-Dichloroethene		ND	0.080	0.013	ND	0.32	0.052
cis-1,2-Dichloroethene	e	ND	0.080	0,024	ND	0.32	0.095
SURROGATE			PERCENT RECOVERY		CON	ORATORY (TROL ITS (%)	

60 - 140

83

Qualifiers

4-Bromofluorobenzene

I Estimated result. Result is less than RL.

Result (ng/m3) = Result (ppb(v/v)) (unrounded) * (Molecular Weight/24.45)

 $Reporting\ Limit\ (ng/m3) = Reporting\ Limit\ (ppb(v/v))[uarounded] * (Molecular\ Weight/24.45)$

MDL (ug/m3) = MDL (ppb(v/v))[unrounded] * (Molecular Weight/24.45)

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Client Sample ID; CUE0116-09

GC/MS Volatiles

Lot-Sample#	H1E060660 - 009	Work Order#	MH3P31AA	Matrix;	AIR
Date Sampled:	05/03/2011	Date Received:	05/06/2011		
Prep Date:	05/10/2011	Analysis Time:	05/10/2011		
Prep Batch #:	1130245	Analysis Time	20;15		
Dilution Factor.:	1	Method:	TO-15		

PARAMETER	RESULTS (ppb(v/v))		EPORTING IMIT (ppb(v/v))	MDI. (ppb(v/v))	RESULTS (ug/m3)	REPORTING LIMIT (ug/m3)	MDL (ug/m3)
cis-1,2-Dichloroethene	ND	. 0	.080	0.024	ND	0.32	0.095
I,I-Dichloroethene	ND	.0	.080	0.013	ND	0.32	0.052
Vinyl chloride	ND	0	0.080	0,029	ND	0.20	0.074
1,1-Dichloroethane	ND	0	.080	0,010	ND	0.32	0.040
1,1,1-Trichloroethane	ND	0	.080	0.012	ND	0.44	0.065
Trichloroethene	0.034 J	0	.040	0.014	0.18 J	0.21	0.075
trans-1,2-Dichloroethene	ND	0	.080.	0.020	ND	0.32	0.079
Tetrachloroethene	0.020 J	0	.080	0.016	0.13 J	0.54	0.11
1,1,2-Trichloroethane	ND	0	.080	0.021	ND	0.44	0.11

LABORATORY CONTROL PERCENT RECOVERY SURROGATE LIMITS (%) 60 - 140 85

4-Bromofluorobenzene

Qualifiers

Estimated result. Result is less than RL.

Result (ug/m3) = Result (ppb(v/v)) | unrounded| * (Molecular Weight/24.45)

 $Reporting\ Limit\ (ug/m3) = Reporting\ Limit\ (ppb(v/v))[unrounded]\ *\ (Molecular\ Weight/24.45)$

 $MDL \ (ug/m3) = MDL \ (ppb(v/v))[uurounded] * (Molecular \ Weight/24.45)$

Client Sample ID: CUE0116-10

GC/MS Volatiles

Lot-Sample # H	1E060660 - 010		Work Order#	МНЗР51АА	Mai	rix AIR	
Date Sampled:	05/03/2011		Date Received:	05/06/2011			
Prep Date	05/10/2011		Analysis Time:	05/10/2011			
Prep Batch #:	1130245		Analysis Time:	21:05			
Dilution Factor.:	1		Method	TO-15			
PARAMETER		RESULTS (ppb(v/v))	REPORTING LIMIT (ppb(v/v))	MDL (ppb(v/v))	RESULTS (ug/m3)	REPORTING LIMIT (ug/m3)	MDL (ug/m3)
,1,2-Trichloroethane		ND	0.080	0.021	ND	0.44	0.11
rans-1,2-Dichloroethene	E .	ND	0.080	0.020	ND	0.32	0.079
etrachloroethene		ND	0.080	0.016	ND	0.54	0.11
Prichloroethene		ND	0.040	0.014	ND	0.21	0.075
,1,1-Trichloroethane		ND	0.080	0.012	ND	0.44	0.065
,1-Dichloroethane		ND	0.080	0.010	ND	0,32	0.040
,1-Dichloroethene		ND	0,080	0,013	ND	0.32	0.052
/inyl chloride		ND	0.080	0,029	ND	0.20	0.074
is-1,2-Dichloroethene		ND	0.080	0.024	ND	0.32	0.095
SURRÒGATE			PERCENT RECOVERY		CON	SORATORY STROL ITS (%)	

80

60 - 140

4-Bromofluorobenzene

 $Result \ (ug/m3) = Result \ (ppb(v/v)) \{unrounded\} \ ^{\circ} \ (Molecular \ Weight/24.45)$

Reporting Limit (ug/m3) = Reporting Limit (pph(v/v))[unrounded] * (Molecular Weight/24.45)

MDL (ug/m3) = MDL (ppb(v/v))[unrounded] * (Molecular Weight/24.45)

Client Sample ID: CUE0116-11

Lot-Sample# H11	E060660 - 011		Work Order #	MH3P61AA	Mat	rix: AIR	
Date Sampled: Prep Date: Prep Batch #: Dilution Factor.:	05/03/2011 05/10/2011 1130245		Date Received: Analysis Time: Analysis Time: Method	05/06/2011 05/10/2011 21:57 TO-15			
PARAMETER		RESULTS (ppb(v/v))	REPORTING LIMIT (ppb(v/v))	MDL (ppb(v/v))	RESULTS (ug/m3)	REPORTING LIMIT (ug/m3)	MDL (ug/m3)
cis-1,2-Dichloroethene		ND	0.080	0.024	ND	0.32	0.095
Vinyl chloride		ND	0.080	0.029	ND	0.20	0.074
1,1-Dichloroethene		ND	0.080	0,013	ND	0.32	0.052
1,1-Dichloroethane		ND	0.080	0.010	ND	0.32	0.040
1,1,1-Trichloroethane		ND	0.080	0.012	ND	0.44	0.065
Trichloroethene		ND	0.040	0.014	ND	0.21	0.075
Petrachloroethene		ND	0.080	0.016	ND	0.54	0.11
trans-1,2-Dichloroethene		ND	0.080	0.020	ND	0.32	0.079
1.1,2-Trichloroethane		ND	0.080	0.021	ND	0.44	0.11
SURROGATE			PERCENT RECOVERY		CON	ORATORY ITROL ITS (%)	
4-Bromofluorobenzene			82		60 -	140	

 $Result \ (ug/m3) = Result \ (ppb(v/v)) \ [unrounded] \ * \ (Molecular \ Weight/24.45)$

Reporting Limit (ag/m3) = Reporting Limit (ppb(v/v))|unrounded| $^{\pm}$ (Molecular Weight/24.45)

MDL (ug/m3) = MDL (ppb(v/v))[unrounded] * (Molecular Weight/24.45)

Client Sample ID: CUE0116-12

Lot-Sample # HI Date Sampled: Prep Date: Prep Batch #:	05/03/2011 05/10/2011 1130245		Work Order # Date Received: Analysis Time: Analysis Time:	MH3P71AA 05/06/2011 05/10/2011 13:22	Mat	ris; AIR	
Dilution Factor.: PARAMETER	2	RESULTS (ppb(y/v))	Method REPORTING LIMIT (ppb(v/v))	TO-15 MDL (ppb(v/v))	RESULTS (ug/m3)	REPORTING LIMIT (ug/m3)	MDL (ug/m3)
1,1,2-Trichloroethane		ND	0,16	0,042	ND	0.87	0.23
trans-1,2-Dichloroethene		ND	0.16	0.040	ND	0.63	0.16
Tetrachloroethene		2.0	0.16	0.032	13	1.1	0.22
Trichloroethene		18	0.080	0.028	99	0.43	0.15
1,1,1-Trichloroethane		0.92	0.16	0.024	5.0	0.87	0.13
1,1-Dichloroethane		ND	0.16	0.020	ND	0.65	0.081
1,1-Dichloroethene		ND	0.16	0.026	ND	0.63	0.10
Vinyl chloride		ND	0.16	0.058	ND	0.41	0.15
cis-1,2-Dichloroethene		ND	0.16	0.048	ND	0.63	0.19
SURROGATE			PERCENT RECOVERY		CON	ORATORY ITROI: ITS (%)	
4-Bromofluorobenzene			83		60 -	140	-

Result (ug/m3) = Result (ppb(v/v))[uurouuded] * (Molecular Weight/24.45)

 $Reporting \ Limit \ (ug/m3) = Reporting \ Limit \ (ppb(v/v)) | unrounded| \ ^* \ (Molecular \ Weight/24,45)$

 $MDL \ (ug/m3) = MDL \ (ppb(v/v)) [unrounded] \ ^* \ (Molecular \ Weight/24.45)$

Client Sample ID: CUE0116-13

GC/MS Volatiles

Lot-Sample#	H1E060660 - 013		Work Order#	MH3P91AA	Mat	rix: AIR	
Date Sampled: Prep Date: Prep Batch #: Dilution Factor.:	05/03/2011 05/10/2011 1130245 45,45		Dute Received,.: Analysis Time,: Analysis Time: Method:	05/06/2011 05/10/2011 11:47 TO-15			
PARAMETER		RESULTS (ppb(v/v))	REPORTING LIMIT (ppb(v/v))	MDL (ppb(v/v))	RESULTS (ug/m3)	REPORTING LIMIT (ug/m3)	MDL (ug/m3)
cis-1,2-Dichloroethen	е	ND	3.6	1.1	ND	14	4.3
Vinyl chloride		ND	3.6	1.3	ND	9.3	3.4
1,1-Dichloroethene		ND	3.6	0.59	ND	14	2.3
1,1-Dichloroethane		ND	3.6	0,45	ND	15	1.8
1,1,1-Trichloroethan	e	7.8	3.6	0.55	42	20	3.0
Trichloroethene		1100 E	1.8	0.64	5700 E	9.8	3.4
Tetrachloroethene		5.3	3.6	0.73	36	25	4.9
trans-1,2-Dichloroeth	ene	ND	3.6	0.91	ND	14.	3.6
1,1,2-Trichloroethane		ND	3.6	0.95	ND	20	5,2
SURROGATE			PERCENT RECOVERY		CON	ORATORY ITROL ITS (%)	

60 - 140

74

Qualiflers

4-Bromofluorobenzene

E Estimated result, Result concentration exceeds the calibration range,

 ${\it Result (ag/m3) = Result (ppb(v/v))[unrounded] * (Molecular Weight/24.45)}$

Reporting Limit (ug/m3) = Reporting Limit (ppb(v/v))[uurounded] * (Molecular Weight/24.45)

MDI. (ug/m3) = MDI. (ppb(v/v))[unrounded] * (Molecular Weight/24.45)

TO-14 _rev5MDL_DOD.rpt version 5.003 02/07/2011

Client Sample ID: CUE0116-13

GC/MS Volatiles

SURROGATE			PERCENT RECOVERY		CON	ORATORY ITROL ITS (%)	
Trichloroethene		960 D	3.5	1.2	5200 D	19	6.6
PARAMETER.		RESULTS (ppb(v/v))	REPORTING LIMIT (ppb(v/v))	MDL (ρρb(ν/ν))	RESULTS (ug/m3)	REPORTING LIMIT (ug/m3)	MDL (ug/m3)
Dilution Factor.:	87.5		Method	TO-15			
Prep Batch #:	1130245		Analysis Time:	01:18			
Prep Date:	05/10/2011		Analysis Time:	05/11/2011			
Date Sampled:	05/03/2011		Date Received:	05/06/2011			
Lot-Sample #	H1E060660 - 013		Work Order#	MH3P92AA	Mat	rix1 AIR	

Qualifiers

D Result was obtained from the analysis of a dilution.

Result (ug/m3) = Result (ppb(v/v))[unrounded] * (Molecular Weight/24.45)

Reporting Limit (ug/m3) = Reporting Limit (ppb(v/v))[unrounded] * (Molecular Weight/24.45)

MDL (ug/m3) = MDL (ppb(y/v))[unrounded] * (Molecular Weight/24.45)

TO-14 _rev5MDL_DOD.rpt version 5.002 02/07/2011

Client Sample ID: CUE0116-14

GC/MS Volatiles

Lot-Sample#	H1E060660 - 014		Work Order#	MH3QA1AA	Mat	rix: AIR	
Date Sampled:	05/03/2011		Date Received:	05/06/2011			
Prep Date:	05/10/2011		Analysis Time:	05/10/2011			
Prep Batch #;	1130245		Analysis Time:	22:48			
Dilution Factor.:	1		Method:	TO-15			
PARAMETER		RESULTS (ppb(v/v))	REPORTING LIMIT (ppb(v/v))	MDL (ppb(v/v))	RESULTS (ug/m3)	REPORTING LIMIT (ug/m3)	MDI. (ug/m3)
Trichloroethene		0.33	0.040	0.014	1.8	0.21	0.075
1,1,2-Trichloroethane		ND	0.080	0.021	ND	0.44	0.11
trans-1,2-Dichloroethe	ene	ND	0.080	0.020	ND	0.32	0.079
Tetrachloroethene		ND	0.080	0.016	ND	0.54	0.11
1,1,1-Trichloroethane		ND	0.080	0.012	ND	0.44	0.065
1,1-Dichloroethane		ND	0.080	0.010	ND	0.32	0.040
1,1-Dichloroethene		ND	0.080	0.013	ND	0,32	0.052
Vinyl chloride		ND	0.080	0.029	ND	0.20	0.074

0.024

ND

SURROGATE

4-Bromofluorobenzene

cis-1,2-Dichloroethene

PERCENT RECOVERY

0.080

80

ND

LABORATORY CONTROL LIMITS (%)

0.32

0.095

60 - 140

Result (ug/m3) = Result (ppb(v/v))[unrounded] * (Molecular Welght/24.45)

Reporting Limit (ug/m3) = Reporting Limit (ppb(v/v)) [unrounded] * (Molecular Weight/24.45)

 $MDL \; (ug/m3) = MDL \; (ppb(v/v)) [unrounded] \; * \; (Molecular \; Weight/24,45)$

Client Sample ID: CUE0116-15

GC/MS Volatiles

Lot-Sample#	H1E060660 - 015		Work Order#	MH3QC1AA	Mat	rix AIR	
Date Sampled: Prep Date: Prep Batch #: Dilution Factor.:	05/03/2011 05/10/2011 1130245		Date Received: Analysis Time: Analysis Time:	05/06/2011 05/10/2011 23;40 TO-15	7		
PARAMETER		RESULTS (ppb(v/v))	REPORTING LIMIT (ppb(v/v))	MDL (ppb(v/v))	RESULTS (ug/m3)	REPORTING LIMIT (ug/m3)	MDL (ug/m3)
cis-1,2-Dichloroethene		ND	0.080	0.024	ND	0.32	0.095
Vinyl chloride		ND	0.080	0.029	ND	0,20	0.074
I,1-Dichloroethene		ND	0.080	0.013	ND	0.32	0.052
1,1-Dichloroethane		ND	0.080	0.010	ND	0.32	0.040
I, 1, 1-Trichloroethane		ND	0.080	0.012	ND	0.44	0.065
Tetrachloroethene		ND	0.080	0.016	ND	0.54	0.11
trans-1,2-Dichloroether	ne	ND	0.080	0.020	ND	0.32	0.079
1,1,2-Trichloroethane		ND	0.080	0.021	ND	0.44	0.11
Trichloroethene		0.39	0.040	0.014	2.1	0.21	0.075
SURROGATE			PERCENT RECOVERY		CON	BORATORY VTROL UTS (%)	

60 - 140

82

 $Result \ (ug/m3) = Result \ (ppb(v/v))[unrounded] \ * \ (Molecular \ Weight/24.45)$

4-Bromoffuorobenzene

Reporting Limit (ug/m3) = Reporting Limit (ppb(v/v))[unrounded] * (Molecular Weight/24.45)

 $\mathbf{MDL} \; (\mathbf{ug/m3}) = \mathbf{MDL} \; (\mathbf{ppb}(\mathbf{v/v})) [\mathbf{unrounded}] \; \text{``(Molecular Weight/24.45)}$

Client Sample ID: CUE0116-16

GC/MS Volatiles

Lot-Sample #	H1E060660 - 016		Work Order#	MH3QD1AA	Mat	rix AIR	
Date Sampled: Prep Date: Prep Batch #,: Dilution Factor.:	05/03/2011 05/10/2011 1130245		Date Received: Analysis Time: Analysis Time: Method:	05/06/2011 05/11/2011 02:12 TO-15			
PARAMETER		RESULTS (ppb(v/v))	REPORTING LIMIT (ppb(v/v))	MDL (ppb(v/v))	RESULTS (ug/m3)	REPORTING LIMIT (ug/in3)	MDL (ug/m3)
Trichloroethene		0.11	0,040	0.014	0.58	0.21	0.075
trans-1,2-Dichloroeth	ene	ND	0.080	0.020	ND	0.32	0.079
1,1,2-Trichloroethane	*	ND	0.080	0.021	ND.	0.44	0.11
Tetrachloroethene		0.084	0.080	0.016	0.57	0.54	0.11
1,1,1-Trichloroethane	£	ND	0.080	0.012	ND	0.44	0.065
1,1-Dichloroethane		ND	0.080	0.010	ND	0.32	0,040

0.029

0,024

0.013

ND

ND

ND

0.080

0.080

0.080

SURROGATE	PERCENT RECOVERY
4-Bromofluorobenzene	87

ND

ND

ND

Vinyl chloride

cis-1,2-Dichloroethene

1,1-Dichloroethene

LABORATORY CONTROL LIMITS (%)

0.20

0.32

0.32

0.074

0.095

0.052

60 - 140

Result (ug/m3) = Result (ppb(v/v))[unrounded] * (Molecular Weight/24.45)

Reporting Limit (ug/m3) = Reporting Limit (ppb(v/v))[unrounded] * (Molecular Weight/24.45)

 $MDL\ (ug/m3) = MDL\ (ppb(v/v))[unrounded] * (Molecular\ Weight/24.45)$

Client Sample ID: INTRA-LAB BLANK

GC/MS Volatiles

Lot-Sample #	H1E100000 - 245B		Work Order#	MH6VH1AA	Mati	rix: AIR	
Prep Date: Prep Batch #: Dilution Factor.:	05/02/2011 05/10/2011 1130245 1		Date Received: Analysis Time: Analysis Time: Method	05/06/2011 05/10/2011 11:03 TO-15			
PARAMETER		RESULTS (ppb(v/v))	REPORTING LIMIT (ppb(v/v)	MDL (ppb(v/v))	RESULTS (ug/m3)	REPORTING LIMIT (ug/in3)	MDL (ug/m3)
cis-1,2-Dichloroethene	1	ND	0.080	0,024	ND	0.32	0.095
1,1-Dichloroethene		ND	0.080	0.013	ND	0.32	0.052
Vinyl chloride		ND	0.080	0.029	ND	0.20	0.074
1.1-Dichloroethane		ND	0.080	0.010	ND	0.32	0.040
Trichloroethene		ND	0.040	0.014	ND	0.21	0.075
Tetrachloroethene		ND	0.080	0.016	ND	0.54	0.11
1,1,2-Trichloroethane		ND	0.080	0.021	ND	0.44	0.11
1,1,1-Trichloroethane		ND	0.080	0.012	ND	0.44	0.065
trans-1,2-Dichloroethe	ne	ND	0.080	0.020	ND	0.32	0.079
SURROGATE			PERCENT RECOVERY		CON	BORATORY OTROL OTS (%)	
4-Bromofluorobenzen	g		84		60 -	140	

Result (ug/m3) = Result (ppb(v/v)) [unrounded] * (Molecular Weight/24.45)

Reporting Limit (ug/m3) = Reporting Limit (ppb(v/v))[unrounded] * (Molecular Weight/24.45)

 $MDL\ (ug/m3) = MDL\ (ppb(v/v))[unrounded] * (Molecular\ Weight/24.45)$

Client Sample ID: CHECK SAMPLE

GC/MS Volatiles

Lot-Sample#	H1E100000 - 245C		Work Order#	MH6VH1AC		Matrix:	AIR
Prep Date; Prep Batch #; Dilution Factor.;	05/02/2011 05/10/2011 1130245 1	SPIKE AMOUNT (ppb(v/v))	Date Received: Analysis Time: Analysis Time: Method: MEASURED AMOUNT (ppb(v/v))	05/06/2011 05/10/2011 09:15 TO-15 SPIKE AMOUNT (ug/m3)	MEASURED AMOUNT (ug/m3)	PERCENT RECOVERY	RECOVERY LIMITS
Trichloroethene		5.00	5.37	26.9	28.9	107	70 - 130
rans-1,2-Dichloroether	ne	5.00	4.98	19.8	19.8	100	70 - 130
1,1,2-Trichloroethane		5.00	3.78	27.3	20.6	76	70 - 130
Tetrachloroethene		5.00	4,70	33.9	31,9	94	70 - 130
1,1,1-Trichloroethane		5.00	4.44	27.3	24.2	89	70 - 130
I, I-Dichloroethane		5.00	4,54	20.2	18.4	91	70 - 130
1,1-Dichloroethene		5.00	5.18	19.8	20.6	104	70 - 130
cis-1,2-Dichloroethene		5.00	4.70	19.8	18.6	94	70 - 130
Vinyl chloride		5.00	5.57	12.8	14,2	111	70 - 130
SURROGATE			PERCENT RECOVERY			LABORATORY CONTROL LIMITS (%)	
4-Bromofluorobenzene			82			60 - 140	

Result (ug/m3) = Result (ppb(v/v))[unrounded] * (Molecular Weighi/24.45)

Reporting Limit (ug/m3) = Reporting Limit (ppb(v/v))[unrounded] * (Molecular Weight/24.45)

MDL (ug/m3) = MDL (ppb(v/v))[unrounded] * (Molecular Weight/24.45)

5815 Middlebrook Pike Knoxville, TN 37921 phone 865-291-3000 fax 865-584-4315

Canister Samples Chain of Custody Record

TestAmerica assumes no liability with respect to the collection and shipment of these samples.

THE LEADER IN ENVIRONMENTAL TESTING

Client Contact Information	Project Man	nager: Aul	in brim	ryes		Sampled By:)	pric for	ne				1	of_	3	coc	s			
Company: fev valor Address: 8 to 46th Ave City/State/Zip 18 The world . IA 52722 Phone: 563.355.0707 FAX: 5102.355.9781	Phone: Site Contact TAL Contact		2 Hi brin	ncycle	vecon-con	m	3 -0			i j			section)	£197 (1) (1)					ction)
Project Name: Chamberlain Vapor sur plu Site/location: We ter lov . ia	1	Analysis tandard (S	Turnarou pecify)	nd Time				low hourt					ly in notes se						y in notes sea
20# project to 0710710720	7	Rush (Spec	ify)					3				-5	peci	0					pecil
Sample Identification	Sample Date(s)	Time Start	Time Stop	Canister Vacuum in Field, "Hg (Start)	Canister Vacuum in Field, 'Hg (Stop)	Flow Controller	Canister ID	TO-15 LUM	TO-14A	EPA 3C	EPA 25C	ASTM D-1946	Other (Pigase specify in notes	Sample Type	Indoor Air	Ambient Air	Soll Gas	Landfill Gas	Other (Please specify in notes section)
SS-15	5/2/2011	m	1150	-29	-2.5	97	Le 680	x						V N					
SS-10	5/2/2011	1342	1426	-29.5	-1,5	184	IDIOB	2				6	0	96.)					
88-12	5/2/2011	1600	1434	-29	-1.5	74	04399							15					
55-46	5/3/2011	1024	107	-29	-2	191	93046						T	83	-				
1A-B-46	5/2-5/3	1011	1015	-27	-3	X-269	0181							20,					E
1A-1-46	512-513	1008	1152	-30	-5	K387	7482	V											
Sampled by :				Temperatur	e (Fahrenheit			3	h	DXC	25	le	ÍT	h (las	TOI	145	SEA	5
	Start	Interior		Ambient				K	ECE	106	2)	0	AN	bie	ent	7	Em	1	
	Stop			-				3	-94.		5/6	111	E		120	27	7/7	774	1
		1		Pressure (in	nches of Hg)			0	42	08	270	777	122	0	120	82	707	121	7
		Interior		Ambient															
	Start							16	CAI	25	,71	Flou	NS	81	=10	us (i	(3		
	Stop									-	•								









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Canister Samples Chain of Custody Record

THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica assumes no liability with respect to the collection and shipment of these samples.

Client Contact Information	Project Ma	nager: \\N	brima	W.		Sampled By:	melin	e				2	of	3	coc	s			
Company: Yevvacon Address: 870 4014 Ave City/State/Zip Rettendorf, 1A 52722	Phone: 50 Site Contac TAL Contac	3.355.67 et:	oz if brin	Meyer@*	water te	0	0 .0						(uo)	11 4					(ua
Phone: 563, 355, 0702 FAX: 563, 355, 4789 Project Name: Chamber Jain Vapor Ramoling		Analysis	Turnarou	nd Time									notes seci	/ \$					notes sect
Siteriocation: Waster (D) . 117		tandard (Sp						t					ify In						fy in
05 OF OIFO # TryING #OF	-	Rush (Spec	ify)		_			cm				**	spec	Φ					pads
Sample Identification	Sample Date(s)	Time Start	Time Stop	Canister Vacoum in Field, "Hg (Start)	Canister Vacuum in Field, 'Hg (Stop)	Flow Controller	Canister ID	TO-15 Chulumit	TO-14A	EPA 3C	EPA 25C	ASTM D-1946	Other (Please specify in notes section)	Sample Type	Indoor Air	Ambient Air	Soll Gas	Landfill Gas	Offier (Please specify in notes section)
AA-46	5/2-5/3	1022	1117	~30	-25	¥339	4497N	X						15					
1A-1-40	5/25/3	1207	1707	-27	-3	K407	9805B							1					
1A-18-40	3/25/3	1212	1520	2-30	-4	K386	7465							1					
AR - 40	5/25/3	1222	1524	-29,5	-3.5	K153	11352							4					
AAD-48	5/25/3	1222	1524	-29.5	-2	KAUZ	1352N							会員					
95:40	53	1216	1253	-28.5	-2,5	167	54 306	V						10					
Sampled by :				-	e (Fahrenheit)													
	Start	Interior		Ambient						-	-								
	Stop																		
				Pressure (in	nches of Hg)														
		Interior		Ambient															
	Start							-	_										
	Stop																		1









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ାର୍ମ ପ୍ରଥମ Canister Samples Chain of Custody Record

TestAmerica assumes no liability with respect to the collection and shipment of these samples.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Client Contact Information	Project Man	ager:xMV	Nonwe	ger		Sampled By:	ma)	me				3	of	3	coc	s			
Company: 4CVALUV Address: 87D 4CHN AVR City/State/Zip KrillenduA 1A 5272L Phone: 5123.355.0702 FAX: 513.355.4785	Phone:รู้นู-3 Site Contac TAL Contac		- Aforiv	wegen @	tervación, com		1					ĺ	section)	(3) V					(section)
Project Name: Chamberlaw Vapor Sumpl Site/location: Water/100 (A PO# Property PO TO TO TO TO	1 / S	Analysis tandard (Spec tush (Spec		nd Time				Kinnit					pecify in notes						pacify in notes
Sample Identification	Sample Date(s)	Time Start	Time Stop	Canister Vacuum in Field, "Hg (Start)	Canister Vacuum in Field, 'Hg (Stop)	Flow Controller	Canister ID	TO-16 UNW 1	TO-14A	EPA 3C	EPA 25G	ASTM D-1946	Other (Please specify	Sample Type	Indoor Air	Ambient Alr	Soil Gas	Landfill Gas	Other (Please specify in noies section)
55-45	93/2011	1552	1658	-29.S	-1,5	178	7788	X						165°					
IA-1-45	5/2-5/3	1537	1537	-28	-2	K471	7490	1											
1A-B-4S	5/2-5/3	1543	1433	-30	-4.5	K371	93149	W						1.5					
Egupment blance-3	5 3	1651	1455	-	-	-	6515	1					A	TO ME					
0 (的数 图:					
Sampled by :				Temperatur	e (Fahrenhei)					1			31,04					
ben clauses -		Interior		Ambient															
Jendancy motor Enwall	Start							-				_				_	_		
fraise office	Stop			Pressure (to	iches of Hg)			-		_	_	-	_	_					-
		Interior		Ambient															
	Start	7.5																	
	Stop																		





HIE060660

SENDING LABORATORY; TestAmerica Cedar Falls

704 Enterprise Drive Cedar Falls, IA 50613 Phone: 800-750-2401

Fax: 319-277-2425 Project Manager: Brian C. Graettinger RECEIVING LABORATORY:

TestAmerica Knoxville 5815 Middlebrook Pike Knoxville, TN 37921 Phone :(865) 291-3000

Fax: -

Analysis	Due	Expires	Comments	
	Al	r Volume	-244 M-2	
Sample ID: CUE0116-01 Air	Sampled: 05/02/11 11:50	(in L);	6680 w/97	
AIR - Summa Canister Rental	05/12/11 12:00	09/16/38 11:50		
AIR - VOC Scan (TO-15)	05/12/11 12:00	07/31/11 11:50		
AIR - Flow Controller Rental	05/12/11 12:00	02/13/85 11:50		
A TO CIVIDANIC DA	Ai	r Volume	10107/194	
Sample ID: CUE0116-02 Air	Sampled: 05/02/11 14:26	(in L);	1010B w/184	_
AIR - Flow Controller Rental	05/12/11 12:00	02/13/85 14:26		
AIR - Summa Canister Rental	05/12/11 12:00	09/16/38 14:26		
AIR - VOC Scan (TO-15)	05/12/11 12:00	07/31/11 14:26		
Sample ID; CUE0116-03 Air	Sampled: 05/02/11 16:36	r Volume (in L):	04399 w/74	
Sample 15, COEVIIO-03 An	Gampieu. 05/04/11 10/50	(iii L):	04057 11/14	
AIR - Flow Controller Rental	05/12/11 12:00	02/13/85 16:36		
AIR - Summa Canister Rental	05/12/11 12:00	09/16/38 16:36		
AIR - VOC Scan (TO-15)	05/12/11 12:00	07/31/11 16:36		
December 10 CHEMIST AND ALC	S	r Volume	93046 w/191	
Sample ID: CUE0116-04 Air	Sampled: 05/03/11 11:07	(in L):	93040 W/191	-10
AIR - VOC Scan (TO-15)	05/12/11 12:00	08/01/11 11:07		
AIR - Flow Controller Rental	05/12/11 12:00	02/14/85 11:07		
AIR - Summa Canister Rental	05/12/11 12:00	09/17/38 11:07		

Released By

Date.

Received By

Date

Date

Released By

Date

Received By

SUBCONTRACT ORDER

TestAmerica Cedar Falls CUE0116

HIEDOLLO

Analysis	Due	Expires	Comments	
	Air	Volume		
Sample ID: CUE0116-05 Air	Sampled: 05/03/11 10:15	(in L):	0181 w/K269	
AIR - VOC Scan (TO-15)	05/12/11 12:00	08/01/11 10:15		
AIR - Flow Controller Rental	05/12/11 12:00	02/14/85 10:15		
AIR - Summa Canister Rental	05/12/11 12:00	09/17/38 10:15		
Sample ID; CUE0116-06 Air	Sampled: 05/03/11 11:52	Volume	7482 w/K387	
Sample ID, COEVITO-00 An	Sampled: 05/05/11 11:52	(in L):	(402 W/XD0)	
AIR - Flow Controller Rental	05/12/11 12:00	02/14/85 11:52		
AIR - Summa Canister Rental	05/12/11 12:00	09/17/38 11:52		
AIR - VOC Scan (TO-15)	05/12/11 12:00	08/01/11 11:52		
Sample ID: CUE0116-07 Air	Sampled: 05/03/11 11:17	Volume (in L):	4497N w/K339	
AJR - Flow Controller Rental	05/12/11 12:00	02/14/85 11:17		
AIR - Summa Canister Rental	05/12/11 12:00	09/17/38 11:17		
AIR - VOC Scan (TO-15)	05/12/11 12:00	08/01/11 11:17		
	Air	Volume		
Sample ID: CUE0116-08 Air	Sampled: 05/03/11 12:09	(in L):	9805B w/K407	
AIR - Summa Canister Rental	05/12/11 12:00	09/17/38 12:09		
AIR - Flow Controller Rental	05/12/11 12:00	02/14/85 12:09		
AIR - VOC Scan (TO-15)	05/12/11 12:00	08/01/11 12:09		
Comple Dr. CHE0115 00 Al-	Sampled: 05/02/14 15-24	Volume	7460 w/l2296	
Sample ID: CUE0116-09 Air	Sampled: 05/03/11 15:24	(in L):	746S w/K386	
AIR - Summa Canister Rental	05/12/11 12:00	09/17/38 15:24		
AIR - VOC Scan (TO-15)	05/12/11 12:00	08/01/11 15:24		
AIR - Flow Controller Rental	05/12/11 12:00	02/14/85 15:24		

BCHuty 5/4/1
Released By Date

Received By

Date

Released By

Date

Received By

Date

SUBCONTRACT ORDER

TestAmerica Cedar Falls CUE0116

1415020660

Analysis	Due	Expires	Comments	
	Air	Volume	1235-45°-041-745°	
Sample ID: CUE0116-10 Air	Sampled: 05/03/11 15:24	(in L):	11352 w/K153	
AIR - Flow Controller Rental	05/12/11 12:00	02/14/85 15:24		
AIR - Summa Canister Rental	05/12/11 12:00	09/17/38 15:24		
AIR - VOC Scan (TO-15)	05/12/11 12:00	08/01/11 15:24		
O THE CHARLES IN	Air 1	Volume	10701 - 11/2/0	
Sample ID: CUE0116-11 Air	Sampled: 05/03/11 15:24	(in L):	1352N w/K462	-
AIR - Flow Controller Rental	05/12/11 12:00	02/14/85 15:24		
AIR - Summa Canister Rental	05/12/11 12:00	09/17/38 15:24		
AIR - VOC Scan (TO-15)	05/12/11 12:00	08/01/11 15:24		
Constant De CHERNIC 12 Alle	Famulad: 05/02/11 12:53	Volume	04306 w/167	
Sample ID: CUE0116-12 Air	Sampled: 05/03/11 12:53	(in L);	04300 W/107	
AIR - VOC Scan (TO-15)	05/12/11 12:00	08/01/11 12:53		
AIR - Flow Controller Rental	05/12/11 12:00	02/14/85 12:53		
AIR - Summa Canister Rental	05/12/11 12:00	09/17/38 12:53		
Course ID. CVIDALIC 12. Also	Air 1	Volume	7788 w/178	
Sample ID: CUE0116-13 Air	Sampled: 05/03/11 16:28	(in L):	//80 W/1/8	
AIR - VOC Scan (TO-15)	05/12/11 12:00	08/01/11 16:28		
AIR - Flow Controller Rental	05/12/11 12:00	02/14/85 16:28		
AIR - Summa Canister Rental	05/12/11 12:00	09/17/38 16:28		
Sample ID: CUE0116-14 Air	Sampled: 05/03/11 15:37	Volume	7490 w/K471	
Sample ID. COEUTTO-14 AIF	Sampieu, voivo/11 15.5 i	(in L);	11501111 0251	
AIR - Flow Controller Rental	05/12/11 12:00	02/14/85 15:37		
AIR - Summa Canister Rental	05/12/11 12:00	09/17/38 15:37		
AIR - VOC Scan (TO-15)	05/12/11 12:00	08/01/11 15:37		

Received By

Date

Released By

Date

Received By

Date

SUBCONTRACT ORDER

TestAmerica Cedar Falls CUE0116

H1E160460

Analysis	Due	Expires	Comments	
Sample ID: CUE0116-15 Air	Sampled: 05/03/11 16:33	r Volume (in L);	93149 w/K371	
AIR - Flow Controller Rental	05/12/11 12:00	02/14/85 16:33		
AIR - Summa Canister Rental	05/12/11 12:00	09/17/38 16:33		
AIR - VOC Scan (TO-15)	05/12/11 12:00	08/01/11 16:33		
Sample ID: CUE0116-16 Air	Sampled: 05/03/11 16:55	r Volume	6515	
Sample ID. COEVITO-TO AII	Sampled, 05/05/11 10:55	(in L):	0313	
AIR - VOC Scan (TO-15)	05/12/11 12:00	08/01/11 16:55		
AIR - Flow Controller Rental	05/12/11 12:00	02/14/85 16:55		
AIR - Summa Canister Rental	05/12/11 12:00	09/17/38 16:55		

B. C. Freet 5/4/11
Released By Date

Received By

Date

Released By

Date

Received By

Date

1-11E-060660

704 ENTERPRISE DRIVE • CEDAR FALLS, IA 50613 800-750-2401 • 319-277-2425 FAX



IH Sample Receipt Form

Client: Te Nacon	Pro	oject:
City: Bettendorf Date: 5/3/11 COC Completed Correct (Cite inconsistencies below)	Receiver's Initials: MF James	Time (Delivered): 1740
Sample Checklist (Check indi	cates conformance failure)	Couriers
Received Broken	Information Missing	
Improper Media	Missing Sample	UPS TA Courier
Missing Label	Sample Past Hold Date	FedEx TA Field Services
Temperature	Extra Sample	FedEx Ground Client
COC Discrepancy	Insufficient Sample Volume	USPS Other
Other:		Spee-Dee
Reviewed By BC6 Comments	Date	Samples Not Received in a Cooler Temperature Not Taken
Remarks/Action Take	n:	Initial/Date:

Review Items	Yes	No	NA	If No, what was the problem?	Comments/Actions Taken
Do sample container labels match COC? (IDs, Dates, Times)	X			☐ 1a Do not match COC ☐ 1b Incomplete information ☐ 1c Marking smeared ☐ 1d Label tom ☐ 1e No label ☐ 1f COC not received ☐ 1g Other:	
 Is the cooler temperature within limits? (> freezing temp. of water to 6 °C, VOST: 10°C) 			X	☐ 2a Temp Blank = ☐ 2b Cooler Temp = ☐ 2c Cooling initiated for recently collected samples, ice present.	
 Were samples received with correct chemical preservative (excluding Encore)? 			X	☐ 3a Sample preservative =	
4. Were custody seals present/intact on cooler and/or containers?	X			☐ 4a Not present ☐ 4b Not intact ☐ 4c Other:	
5. Were all of the samples listed on the COC received?	X			☐ 5a Samples received-not on COC☐ ☐ 5b Samples not received-on COC☐	
6. Were all of the sample containers received intact?	X			☐ 6a Leaking ☐ 6b Broken	
7. Were VOA samples received without headspace?	10		X	☐ 7a Headspace (VOA only)	
8. Were samples received in appropriate containers?	X			☐ 8a Improper container	
Did you check for residual chlorine, if necessary?			X	□ 9a Could not be determined due to matrix interference	
10. Were samples received within holding time?	X			□ 10a Holding time expired	
11. For rad samples, was sample activity info. provided?			X	☐ Incomplete information	
12. For 1613B water samples is pH<9?			X	If no, was pH adjusted to pH 7-9 with sulfuric acid?	
13. Are the shipping containers intact?	X			☐ 13a Leaking ☐ 13b Other:	
14. Was COC relinquished? (Signed/Dated/Timed)	X			□ 14a Not relinquished	
15. Are tests/parameters listed for each sample?	X			☐ 15a Incomplete information	
16. Is the matrix of the samples noted?	X			☐ 15a Incomplete information	
17. Is the date/time of sample collection noted?	X			☐ 15a Incomplete information	
18. Is the client and project name/# identified?	X			☐ 15a Incomplete information	
19. Was the sampler identified on the COC?	X				

Sample Receiving Associate: Reservor

Date: 5/6/11

QA026R22.doc, 012811

Test America - Knoxville ---- Air Canister Dilution Log Lot Number: <u>H1E060660</u>

			Initial Can Pressu	re								Sul	sequent I	Dilutions				
Analyst/Date	Tedlar Bag Time	Pbarr (in)	Sample ID	Can#	Pres. upon receipt (-in or + psig)	Adj. Initial Pres. (- in or + psig)	Analyst/Date	1	Pbarr (in)	Initial Pres. Pi (in)	Final Pres. Pf (psig)	First InCan Final Pres. Pf (psig)	Second In-can Final Pres. Pf (psig)	Third InCan Final Pres. Pf (psig)	Serial Dilution Can #	Vol (mL)	Final Pres. Pf (psig)	Comments
39/11	M	28.75	мнзрм	6680 ✓	-1.2	-												9204
1	1	1	MH3PR	1010B ~	-0.3	-												9203
			MH3PT	04399 ~	-1.3	1												9195
			MH3PV	93046	-0.7	1												9196
			MH3PW	0181 ~	1.3	1												9198
			мнзрх	7482 /	-3.6)		П										9197
			мнзр0	4497N ~	1.0	1												9195
			MH3P2	9805B V	-5.6	1												9192
			мнзрз	7465	-3.2	1												9199
			MH3P5	11352 /	-1-8	1												9192
			мнзр6	1352N V	1.0	4												9192
			мнзр7	04306 /	-1.7	1												9/95
			мнзр9	7788 🗸	-0.6	1	Molu	XI S	28-81	-1.2	33.3							9182
			мнзоа	7490 V	-2.6	-												9192
			MH3QC	93149 /	-3.6	-												
1	1		MH3QD	6515 V	1.0+	1												1

5815 Middlebrook Pike Knoxville, TN 37921 phone 865-291-3000 fax 865-584-4315

Canister Samples Chain of Custody Record

TeslAmerica assumes no liability with respect to the collection and shipment of these samples.

THE LEADER IN ENVIRONMENTAL TESTING

Client Contact Information	Project Mar	Project Manager: Juhn briway Sampler Phone: GL 3. 355. 071 2 ff briway Phone Site Contact: TAL Contact:						ne				of 3 cocs								
Company: twyaum Address: 87m 4644 Ave City/State/Zip Ratewdorf, NA 52222 Phone: 543, 355,0707	Phone: Cura Site Contact TAL Contact	1.355.0°n t: t:	2 if brin	newer @	run-un	Sampled By:	1 10						section)							
FAX: 5102.355.4787 Project Name: Chamberlan Vapor saw plin Site/location: Was textico. La PO# project & OTIOTICO	T S	Analysis tandard (Spec		nd Time	à.			Un bunt					specify in notes s							
Sample Identification	Sample Date(s)	Time Start	Time Stop	Canister Vacuum in Field, "Hg (Start)	Canister Vacuum in Field, 'Hg (Stop)	Flow Controller	Canister ID	TO-15 LVW	TO-14A	EPA 3C	EPA 25C	ASTM D-1946	Other (Please s	Sample Type	Indoor Air	Ambient Air	Soil Gas	Landfill Gas		
SS-15	5/2/2011	m	1150	-29	-2.5	97	le 680	X												
SS-10	5/2/2011	1342	1426	-29.5	-1,5	184	101013	3						•						
SS-162	5/2/2011	1600	1434	-29	-1.5	74	04399							1)47				- 1		
55-46	5/3/2011	1024	1107	-29	~2	191	93046							1,0						
1A-B-46	5/2-5/3	1011	MOIS	-27	-3	X-269	0181		1.					= 3						
IA-1-44	512-513	1008	1152	-30	-5	K387	7482	J						1						
Sampled by :				Temperatur	e (Fahrenheit		*													
ar a	Start	Interior		Ambient					_	_	_	_		_	_			-		
-	Stop								_			-	-	_		_				
				Pressure (I	nches of Hg)				_											
		Interior		Ambient																
	Start																			
	Stop																			

5815 Middlebrook Pike Knoxville, TN 37921 phone 865-291-3000 fax 865-584-4315

Canister Samples Chain of Custody Record

TestAmerica assumes no liability with respect to the collection and shipment of these samples.

THE LEADER IN ENVIRONMENTAL TESTING

Project Manager: hhu by well Sampled By: YVAC YME COCs Client Contact Information Phone: 563.355.6702 if bringeyer@ tovacon.com Company: Levvacon Address: 870 40th Ave Site Contact: TAL Contact: City/State/Zip Rettendorf 1A 52727 Phone: 543, 355, 0402 FAX: 563, 355, 4789 Project Name: Chamber lain 15 mor Salupling Analysis-Turnaround Time Site/location: Water mi. 14 E Standard (Specify)) Continuit OSOFOLFO #throng #69 Rush (Specify) Sample Type **ASTM D-1946** Other (Please Landfill Gas Ambient Air Indoor Air Canister Canister EPA 25C Soil Gas TO-14A Vacuum in Vacuum in TO-15 Flow Controller Sample Field, "Hg Field, 'Hg Sample Identification Date(s) Time Start Time Stop (Start) (Stop) Canister ID -30 -25 MFPA4 AA-46 1022 1117 V339 5/2-5/2 1A-1-40 V-407 9805B -27 1207 1207 1520 4-30 K386 1212 1A-18-40 7465 1524 -3.5 AK - 40 1222 -29,5 K153 11352 1524 -29.5 -2 KAUZ 1352N 1222 AAD-40 53 -25 85.40 1253 285 167 04304 Temperature (Fahrenheit) Sampled by : Interior Ambient Start Stop Pressure (inches of Hg) Interior Ambient Start Stop Special Instructions/QC Requirements & Comments: Canisters Shipped by: Canisters Received by: Date/Time: Samples Relinquished by: Received by: Rélinquished by: Date/Time: Received by:

5815 Middlebrook Pike Knoxville, TN 37921 phone 865-291-3000 fax 865-584-4315

Canister Samples Chain of Custody Record

TestAmerica assumes no liability with respect to the collection and shipment of these samples.

THE LEADER IN ENVIRONMENTAL TESTING

Client Contact Information	Project Mar	nager: W	byme	yer	Sampled By:	mc)	me				3 of 3 cocs							
Company: 40 Value Address: 870 40 M Ave City/State/Zip Yellewan IA 5272 Phone: 563.355.0702 FAX: 563.355.4186 Project Name: Chanberlaw Vapor Samplin Site/location: Walue IA	Phone: Sig 2 Site Contact TAL Contact	et:	Turnarou		com		4		+1									
Site/location: Washing \A	s	tandard (S	pecify))				trus.					ify in no					
Sample Identification	Sample Date(s)	Rush (Spec		Canister Vacuum in Field, "Hg (Start)	Canister Vacuum in Field, 'Hg (Stop)	Flow Controller	Canister ID	TO-15 brw being	TO-14A	EPA 3C	EPA 25C	ASTM D-1946	Other (Please specify in notes section)	Sample Type	Indoor Air	Ambient Air	Soil Gas	Landfill Gas
55.45	5/3/2011	1552	1628	-29.5	-1,5	178	7788	X										
IA-1-45	512-513	1637	1537	-28	-2	4471	7490	4										
11-12-4C	5/2-5/3	1543	1433	-30	-4.5	K371	93149	W						x				
Egrupment blank -3	5 3	1651	1455	_	-	_	6515	V										
Sampled by :				1	e (Fahrenhei	0												+
Sampled by: Jen clancy mother exwell	Start	Interior		Ambient														
fusial edinary	Stop			Dracenta (in	nches of Hg)			-	_	_		_	-	_	-	_		-
		Interior		Ambient	unes of rig/							-						
	Start																	
	Stop																	





THE LEADER IN ENVIRONMENTAL TESTING

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1

L.

IH Sample Receipt Form

Client: Te Nacon		Project:
City: Bettenfork	IJa	
Date: 5/3/11	Receiver's Initials: MP/	Time (Delivered): 1740
COC Completed Correct (Cite Inconsistencies below) Sample Checklist (Check indi		Couriers
Received Broken	Information Missing	Couriers
Improper Media	Missing Sample	UPS TA Courier
Missing Label	Sample Past Hold Date	FedEx TA Field Services
Temperature	Extra Sample	FedEx Ground Client
COC Discrepancy	Insufficient Sample Volun	
Other:		Spee-Dee
Reviewed By BC6 Comments	Date _ <u>5/4/11</u>	Samples Not Received in a Cooler Temperature Not Taken
	n:	Initial/Date:

H:\QA Folder\QA Forms & Log Book pgs\IH Cooler Receipt Rev 7.doc

ANALYTICAL REPORT

TestAmerica Laboratories, Inc. TestAmerica Cedar Falls 704 Enterprise Drive Cedar Falls, IA 50613 Tel: 800-750-2401

TestAmerica Job ID: CUE0188

Client Project/Site: Chamberlain Vapor Sampling

Client Project Description: TO-15 Scans

For:

TERRACON - BETTENDORF 870 40th Avenue Bettendorf, IA 52722

Attn: John Brimeyer

Authorized for release by: 05/17/2011 11:46:20 AM

Brian C. Graettinger
Operations Manager
brian.graettinger@testamericainc.com

LINKS

Review your project results through

Total Access

Have a Question?



Visit us at: www.testamericainc.com This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Case Narrative

Client: TERRACON - BETTENDORF Project/Site: Chamberlain Vapor Sampling TestAmerica Job ID: CUE0188

E

Job ID: CUE0188

Laboratory: TestAmerica Cedar Falls

Narrative

Analyzed by TestAmerica - Knoxville, TN.

Sample Summary

TestAmerica Job ID: CUE0188

Client: TERRACON - BETTENDORF Project/Site: Chamberlain Vapor Sampling

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
CUE0188-01	SS-67	Air	05/04/11 13:05	05/04/11 13:35
CUE0188-02	SSD-67	Air	05/04/11 13:05	05/04/11 13:35

3

Client: TERRACON - BETTENDORF Project/Site: Chamberlain Vapor Sampling

Client Sample ID: SS-67

Lab Sample ID: CUE0188-01

Date Collected: 05/04/11 13:05 Date Received: 05/04/11 13:35

Matrix: Air

Method: EPA TO-15 - Air	Sample A	Analysis - Sub	contract
Amalada		Daguile	Qualifies

RL MDL Unit Analyst Analyzed Dil Fac D 0.10 BCG 05/09/11 00:00 1.0 Volatile Organic Compounds See mg Attached

Report.

Client Sample ID: SSD-67 Lab Sample ID: CUE0188-02

Date Collected: 05/04/11 13:05 Matrix: Air

Date Received: 05/04/11 13:35

Method: EPA TO-15 - Air Sample Analysis - Subcontract

Dil Fac Result Qualifier RL MDL Analyst Analyzed Unit D Volatile Organic Compounds See 0.10 mg BCG 05/09/11 00:00 1.0

Attached Report.

H1E060641 Analytical Report	1
Sample Receipt Documentation	9
Total Number of Pages	13

TestAmerica Laboratories, Inc.

ANALYTICAL REPORT

PROJECT NO. CUE0188

Terracon

Lot #: H1E060641

Brian Graettinger

TestAmerica Cedar Falls 704 Enterprise Drive Cedar Falls, IA 50613-0625

TESTAMERICA LABORATORIES, INC.

Jamie A. McKinney Project Manager

May 13, 2011

ANALYTICAL METHODS SUMMARY

H1E060641

PARAMET	ER	ANALYTICAL METHOD
Volatil	e Organics by TO15	EPA-2 TO-15
Referen	ces:	
EPA-2	"Compendium of Methods for the De Organic Compounds in Ambient Air" January 1999.	

SAMPLE SUMMARY

H1E060641

WO # 5	SAMPLE#	CLIENT SAMPLE ID	SAMPLED SAMP DATE TIME
МНЗІН	001	CUE0188-01	05/04/11 13:05
MH3LN	002	CUE0188-02	05/04/11 13:05

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

PROJECT NARRATIVE H1E060641

The results reported herein are applicable to the samples submitted for analysis only. If you have any questions about this report, please call (865) 291-3000 to speak with the TestAmerica project manager listed on the cover page.

This report shall not be reproduced except in full, without the written approval of the laboratory.

The original chain of custody documentation is included with this report.

Sample Receipt

There were no problems with the condition of the samples received.

Quality Control and Data Interpretation

Unless otherwise noted, all holding times and QC criteria were met and the test results shown in this report meet all applicable NELAC requirements.

EPA methods TO-14A and TO-15 specify the use of humidified "zero air" as the blank reagent for canister cleaning, instrument calibration and sample analysis. Ultra-high purity humidified nitrogen from a cryogenic reservoir is used in place of "zero air" by TestAmerica Knoxville.

TestAmerica Knoxville maintains the following certifications, approvals and accreditations: Arkansas DEQ Lab #88-0688, California DHS ELAP Cert. #2423, Colorado DPHE, Connecticut DPH Lab #PH-0223, Florida DOH Lab #E87177, Georgia DNR Lab #906, Hawaii DOH, Illinois EPA Lab #200012, Indiana DOH Lab #C-TN-02, Iowa DNR Lab #375, Kansas DHE Cert. #E-10349, Kentucky DEP Lab #90101, Louisiana DEQ Cert. #03079, Louisiana DOHH, Maryland DOE Cert. #277, Michigan DEQ Lab #9933, Nevada DEP, New Jersey DEP Lab #TN001, New York DOH Lab #10781, North Carolina DPH Lab #21705, North Carolina DEHNR Cert. #64, Ohio EPA VAP Lab #CL0059, Oklahoma DEQ Lab #9415, Pennsylvania DEP Lab #68-00576, South Carolina DHEC Cert #84001001, Tennessee DOH Lab #02014, Texas CEQ, Utah DOH Lab # QUAN3, Virginia DGS Lab #00165, Washington DOE Lab #C1314, West Virginia DEP Cert. #345, West Virginia DHHR Cert #9955C, Wisconsin DNR Lab #998044300, Naval Facilities Engineering Service Center and USDA Soil Permit #S-46424. This list of approvals is subject to change and does not imply that laboratory certification is available for all parameters reported in this environmental sample data report.

Client Sample ID: CUE0188-01

GC/MS Volatiles

Lot-Sample # 111	B060641 - 001		Work Order#	MH3LH1AA	Mat	rix: AIR	
Date Sampled: Prep Date: Prep Batch #: Dilution Factor.:	05/04/2011 05/09/2011 1130108		Date Received: Analysis Time; Analysis Time; Method	05/06/2011 05/09/2011 14:03 TO-15			
PARAMETER		RESULTS (ppb(v/v))	REPORTING LIMIT (ppb(v/v)	MDL (ppb(v/v))	RESULTS (ug/m3)	REPORTING LIMIT (ug/m3)	MDL (ug/m3)
cis-1,2-Dichloroethene		ND	0.080	0.024	ND	0.32	0.095
I,I-Dichloroethene		ND	0.080	0.013	ND	0.32	0.052
Vinyl chloride		ND	0.080	0.029	ND	0.20	0.074
1,1-Dichloroethane		ND	0.080	0.010	ND	0.32	0.040
1,1,1-Trichloroethane		ND	0.080	0.012	ND	0.44	0.065
Trichloroethene		ND	0.040	0.014	ND	0.21	0.075
trans-1,2-Dichloroethene		ND	0.080	0.020	ND	0.32	0.079
Tetrachloroethene		0.064 J	0.080	0.016	0.43 J	0.54	0.11
1,1,2-Trichloroethane		ND	0.080	0.021	ND	0.44	0.11
SURROGATE			PERCENT RECOVERY		CON	ORATORY ITROL ITS (%)	
4-Bromofluorobenzene		-	105		60 -	140	

Qualifiers

J Estimated result. Result is less than RL.

 $Result \ (ug/m3) = Result \ (pph(v/v))[unrounded] \ ^{+} \ (Molecular \ Weight/24.45)$

 $Reporting\ Limit\ (ug/m3) = Reporting\ Limit\ (ppb(y/y))[unrounded]\ ^{\circ}\ (Molecular\ Weight/24.45)$

 $MDL\ (ug/m3) = MDL\ (ppb(v/v))[uurounded] \ ^{o}\ (Molecular\ Weight/24,45)$

Client Sample ID: CUE0188-02

GC/MS Volatiles

Lot-Sample#	H1E060641 - 002		Work Order#	MH3LN1AA	Mat	rix AIR	
Date Sampled: Prep Date: Prep Batch #: Dilution Factor.:	05/04/2011 05/09/2011 1130108		Date Received: Analysis Time: Analysis Time: Method	05/06/2011 05/09/2011 14:57 TO-15			
PARAMETER		RESULTS (ppb(v/v))	REPORTING LIMIT (ppb(v/v))	MDL (ppb(v/v))	RESULTS (ug/m3)	REPORTING LIMIT (ug/m3)	MDL (ug/m3)
1,1,2-Trichloroethane		ND	0.080	0.021	ND	0.44	0.11
Tetrachloroethene		0.077 J	0.080	0.016	0.52 J	0.54	0.11
trans-1,2-Dichloroeth	ene	ND	0.080	0.020	ND	0.32	0.079
Trichloroethene		0.015 J	0,040	0.014	0.081 J	0.21	0.075
1,1,1-Trichloroethan	ie	0.012 J	0.080	0.012	0.068 J	0.44	0.065
1,1-Dichloroethane		ND	0.080	0.010	ND	0.32	0.040
Vinyl chloride		ND	0.080	0.029	ND	0.20	0.074
I,1-Dichloroethene		ND	0.080	0.013	ND	0.32	0.052
cis-1,2-Dichloroethen		ND	0.080	0.024	ND	0.32	0.095

PERCENT

109

RECOVERY

LABORATORY

CONTROL

LIMITS (%)

60 - 140

Qualifiers

SURROGATE

4-Bromofluorobenzene

J Estimated result. Result is less than RL.

 $Result \, (ug/m3) = Result \, (ppb(v/v)) [unrounded] \, \# \, (Molecular \, Weight/24.45)$

 $Reporting \ Limit \ (ug/m3) = Reporting \ Limit \ (ppb(v/v))[uarounded] \ ^* \ (Molecular \ Weight/24.45)$

 $\mathbf{MDL} \ (\mathbf{ug/m3}) = \mathbf{MDL} \ (\mathbf{ppb(v/v)}) \| \mathbf{unrounded} \| ^* \ (\mathbf{Molecular} \ \mathbf{Weight/24.45})$

Client Sample ID: INTRA-LAB BLANK

GC/MS Volatiles

Lot-Sample#	H1E100000 - 108B		Work Order#	MH59TIAA	Mat	rix AIR	
Prep Date: Prep Batch #! Dilution Factor.:	05/04/2011 05/09/2011 1130108 1		Date Received: Analysis Time: Analysis Time: Method:	05/06/2011 05/09/2011 11:20 TO-15			
PARAMETER		RESULTS (ppb(v/v))	REPORTING LIMIT (ppb(v/v))	MDI. (ppb(v/v))	RESULTS (ug/m3)	REPORTING LIMIT (ug/m3)	MDL (ug/m3)
cis-1,2-Dichloroethene		ND	0.080	0.024	ND	0.32	0.095
1,1-Dichloroethene		ND	0.080	0.013	ND	0.32	0.052
Vinyl chloride		ND	0.080	0.029	ND	0.20	0.074
1,1-Dichloroethane		ND	0.080	0.010	ND	0.32	0.040
I,1,1-Trichloroethane		ND	0.080	0.012	ND	0.44	0.065
Trichloroethene		ND	0.040	0.014	ND	0,21	0.075
rans-1,2-Dichloroether	ne	ND	0.080	0.020	ND	0,32	0.079
Tetrachloroethene		ND	0.080	010.0	ND	0.54	0.11
1,1,2-Trichloroethane		ND	0.080	0.021	ND	0.44	0.11
SURROGATE			PERCENT RECOVERY		CON	ORATORY ITROL ITS (%)	
4-Bromofluorobenzene	S.		113		60 -	140	

 $[\]mathbf{Result} \ (ug/m3) = \mathbf{Result} \ (ppb(v/v)) | unrounded] * (Molecular \ Weight/24.45)$

Reporting Limit (ug/m3) = Reporting Limit (ppb(v/v))[unrounded] * (Molecular Weight/24.45)

 $MDL\ (ug/m3) = MDL\ (ppb(y/y))[unrounded] * (Molecular\ Weight/24.45)$

Client Sample ID: CHECK SAMPLE

GC/MS Volatiles

05/04/2011 05/09/2011 1130108		Date Received: Analysis Time: Analysis Time: Method	05/06/2011 05/09/2011 09:18			
	SPIKE AMOUNT (ppb(v/v))	MEASURED AMOUNT (ppb(y/y))	TO-15 SPIKE AMOUNT (ug/m3)	MEASURED AMOUNT (ug/m3)	PERCENT RECOVERY	RECOVERY LIMITS
	5.00	5,34	33.9	36.2	107	70 - 130
	5.00	5,38	27.3	29,3	108	70 - 130
	5.00	5,66	19.8	22.4	113	70-130
	5.00	5.70	26.9	30.6	114	70 - 130
	5.00	5.32	27.3	29.0	106	70 - 130
	5,00	5.47	20.2	22,1	109	70 - 130
	5.00	5.38	19.8	21,3	108	70 - 130
	5.00	6.01	19,8	23.8	120	70 - 130
	5.00	5.82	12.8	14.9	116	70 - 130
		PERCENT RECOVERY			The second second second	
		5.00 5.00	5.00 5.38 5.00 6.01 5.00 5.82 PERCENT RECOVERY	5.00 5.38 19.8 5.00 6.01 19.8 5.00 5.82 12.8 PERCENT RECOVERY	5.00 5.38 19.8 21.3 5.00 6.01 19.8 23.8 5.00 5.82 12.8 14.9 PERCENT RECOVERY	5.00 5.38 19.8 21.3 108 5.00 6.01 19.8 23.8 120 5.00 5.82 12.8 14.9 116

 $Result \; (ug/m3) = Result \; (ppb(v/v)) [unrounded] \; * \; (Molecular \; Weight/24.45)$

Reporting Limit (ug/m3) = Reporting Limit (ppb(v/v))[unrounded] * (Molecular Weight/24.45)

 $MDL\ (ug/m3) = MDL\ (ppb(v/v))[unrounded] * (Nielecular\ Weight/24.45)$

5815 Middlebrook Pike Knoxville, TN 37921 phone 865-291-3000 fax 865-584-4315

Canister Samples Chain of Custody Record

TestAmerica

TestAmerica assumes no liability with respect to the collection and shipment of these samples.

THE LEADER IN ENVIRONMENTAL TESTING

Project Man	ager: XiV	n bon	Menen	I Works	Sampled By:	pine lde	c				1	of	1	coc	s		
		24 pur	neger e	Corn								rection)	報	Ť			ection)
	Analysis	Turnarou	nd Time								1	otes	M. 0				0(88.8
S			na imic				+=					n u					in in
(F	Rush (Spec	ify)					3					pecif					pedify
Sample Date(s)	Time Start	Time Stop	Canister Vacuum in Field, "Hg (Start)	Canister Vacuum in Field, 'Hg (Stop)	Flow Controller	Canister ID	TO-15 (J/W)	TO-14A	EPA 3C	EPA 25C	ASTM D-1946	Other (Please s	Sample Type	Indoor Air	Ambient Air	Soll Gas	Landfill Gas Other (Please spediy in notes section)
514/2011	1227	1305	-28.5	-2.5	83	7472	X						40				
Ji	1227	1305	4-30	-4	02	1212129	X										
			Temperatur	(Fahrenhei	1)		1	1	X		WIT	h	Cu	STO	άλγ	51	EALS
	Interior		Ambient				3	EC	EIVE	20	(D)	An	bid	PNT	-4	EM	٥
						-	1	R.4	٢.	5/6	11/2	F.	11.	110	177	A-7-	1286
отор			Pressure (in	ches of Hg)	-		1	21	DAI						21	DI	1250
	Interior		Ambient					~ 0	TIN	_	-24	-	100	0.5			
Start																	
Stop	LU.																
1	Sample Date(s) Start Start Start	Analysis Standard (S) Rush (Special Sample Date(s) Sample Date(s) Illustration Start Stop Interior Start	Analysis Turnarou Standard (Specify) Rush (Specify) Sample Date(s) Time Start Time Stop Start Interior Start Stop Interior Start	Analysis Turnacound Time Standard (Specify) Rush (Specify) Canister Vacuum in Field, "Hg (Start) Start 1305 28.5 Temperature 1707 1305 270 Temperature 1707 1305 1305 1305 Temperature 1707 1305 Temperature 1707	Sample Standard (Specify) Sample Date(s) Time Start Time Stop (Start) Standard (Specify) Canister Vacuum in Field, "Hg (Stop) SIAN 1227 1305 28.5 -2.5 1227 1305 4-30 -4 Temperature (Fahrenheit Start Stop) Pressure (inches of Hg) Interior Ambient	Analysis Turnaround Time Standard (Specify) Rush (Specify) Sample Date(s) Time Start Time Stop (Start) Start Stop Temperature (Fahrenheit) Interior Ambient Start Start Start Start Start Start Start Start Start Start Ambient Start Start Start St	Analysis Turnaround Time Standard (Specify) Rush (Specify) Sample Date(s) Fime Start Time Stop (Start) Start Time Stop Canister Vacuum in Field, "Hg (Stop) Field, "Hg (Stop) Top (Start) Top (Start) Top (Start) Temperature (Fahrenheit) Ambient Start Stop Pressure (inches of Hg) Interior Ambient	Analysis Turnacound Time Standard (Specify) Rush (Specify) Sample Date(s) Time Start Time Stop Canister Vacuum in Field, "Hg (Stor) Field, "Hg (Stor) To Canister Vacuum in Field, "Hg (Stor) Field, "Hg (Stor) To Canister Vacuum in Field, "Hg (Stor) Field, "Hg (Stor) To Canister ID Canister ID	Analysis Turnaround Time Standard (Specify) Rush (Specify) Canister Vacuum in Field, "Hg (Stop) Start 130S - 78.S - 2.S 83 7472 X Temperature (Fahrenheit) Interior Ambient Ref. Start Start Ambient Ref. Interior Ambient Ambient Ref. Start Start Start Ambient Ref. Start Sta	Analysis Turnacound Time Standard (Specify) Rush (Specify) Canister Vacuum in Field, "Hg (Stop) Flow Controller Canister ID Canister ID Canister ID Canister ID Analysis Turnacound Time Start Stop Start Stop Start Stop Start Stop Start Start	Analysis Turnacound Time Standard (Specify) Rush (Specify) Sample Date(s) Time Start Time Stop (Start) Start Temperature (Fahrenheit) Temperature (Fahrenheit) Ambient Start Interior Ambient Ambient Ambient Ambient Start Ambient Ambient	Analysis Turnacound Time Standard (Specify) Rush (Specify) Sample Date(s) Time Start Time Stop Canister Vacuum in Field, "Hg (Stop) ID Canister ID O	Analysis Turnaround Time Standard (Specify) Rush (Specify) Sample Date(s) Time Start Time Stop (Start) Start Temperature (Fahrenheit) Start Stop Pressure (inches of Hg) Analysis Turnaround Time Canister Vacuum in Field, Hg (Stop) Flow Controller Canister ID	Analysis Turnaround Time Standard (Specify) Rush (Specify) Canister Vacuum in Field, "Hig (Stop) Sample Date(s) Time Start Time Stop (Start) Sample Date(s) Temperature (Fahrenheit) Interior Start Stop Pressure (inches of Hg) Interior Ambient Analysis Turnaround Time (Solop) Canister Vacuum in Field, "Hig (Stop) Flow Controller (Canister ID P V V V V V V V V V V V V V V V V V V	Analysis Turnacound Time Standard (Specify) Rush (Specify) Rush (Specify) Rush (Specify) Canister Vacuum in Field, Hig (Start) Field, Hig (Start) Field, Hig (Start) Field, Hig (Start) LTA 130S 78.5 -2.5 C3 7472 X Temperature (Fahrenheit) Interior Ambient Temperature (Fahrenheit) Interior Ambient Pressure (inches of Hg) Pressure (inches of Hg) Interior Ambient Ambient Received Ambient Received Ambient Field, Hig (Start) Field, Hig (Start)	Affalysis Turnacound Time Standard (Specify) Rush (Specify) Rush (Specify) Canister Vacuum in Field, 'Hg F	Analysis Turnacound Time Standard (Specify) Rush (Rush (Specify)) Rush (Rush (Rus



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TestAmerica Cedar Falls CUE0188

SENDING LABORATORY:

TestAmerica Cedar Falls 704 Enterprise Drive Cedar Falls, IA 50613 Phone: 800-750-2401

Fax: 319-277-2425

Project Manager: Brian C. Graettinger

RECEIVING LABORATORY:

TestAmerica Knoxville 5815 Middlebrook Pike Knoxville, TN 37921 Phone :(865) 291-3000

Fax: -

Analysis	Due	Expires	Comments	
Sample ID: CUE0188-01 Air	Sampled: 05/04/11 13:05	ir Volume (in L):	7472 w/83	
AIR - VOC Scan (TO-15)	05/18/11 12:00	08/02/11 13:05		
AIR - Summa Canister Rental	05/18/11 12:00	09/18/38 13:05		
AIR - Flow Controller Rental	05/18/11 12:00	02/15/85 13:05		
Sample ID: CHEA189 D2 Ale	Sampled: 05/04/11 13:05	r Volume	6660 m/02	
Sample ID: CUE0188-02 Air	Sampled: 05/04/11 13:05	(in L):	6669 w/02	
AIR - VOC Scan (TO-15)	05/18/11 12:00	08/02/11 13:05		
AIR - Summa Canister Rental	05/18/11 12:00	09/18/38 13:05		
AIR - Flow Controller Rental	05/18/11 12:00	02/15/85 13:05		

Released By

Date Date

Received By

Date

Date

Released By

Date

Received By



1+15060641

704 ENTERPRISE DRIVE • CEDAR FALLS, IA 50613 800-750-2401 • 319-277-2425 FAX



4

Sample Receipt and Temperature Log Form

Client: errace	7	Project:	
City: Re	ceiver's Initials: CH	Time (Delivere	ed): 13:35
Temperature Record:	Thermometer:	Courier:	
Cooler ID# (if Applicable) NOX C / On Ice Temp Blank	IR - 61997671 'B' IR - 90876942 'C' IR - 61854108 22126775	☐ UPS ☐ FedEx ☐ FedEx Ground ☐ US Postal Service ☐ Spee-Dee	☐ TA Courier ☐ TA Field Services ☐ Client ☐ Other
Temperature out of com	npliance	Exceptions Noted	
Custody seals present? Yes Custody seals intact? Yes No Non-Conformance re	eport started	Sample(s) not received in Samples(s) received samples and Evidence of a chilling Temperature not taken:	ne day of sampling.

Review Items		No	NA	If No, what was the problem?	Comments/Actions Taken
. Do sample container labels match COC? (IDs, Dates, Times)	X			☐ 1a Do not match COC ☐ 1b Incomplete information ☐ 1c Marking smeared ☐ 1d Label torn ☐ 1e No label ☐ 1f COC not received ☐ 1g Other:	
 Is the cooler temperature within limits? (> freezing temp. of water to 6 °C, VOST: 10°C) 			X	☐ 2a Temp Blank = ☐ 2b Cooler Temp = ☐ 2c Cooling initiated for recently collected samples, ice present.	
3. Were samples received with correct chemical preservative (excluding Encore)?			×	☐ 3a Sample preservative =	
Were custody seals present/intact on cooler and/or containers?	X			☐ 4a Not present ☐ 4b Not intact ☐ 4c Other:	
Were all of the samples listed on the COC received?	X			☐ 5a Samples received-not on COC ☐ 5b Samples not received-on COC	
Were all of the sample containers received intact?	X			☐ 6a Leaking ☐ 6b Broken	
7. Were VOA samples received without headspace?			X	☐ 7a Headspace (VOA only)	
. Were samples received in appropriate containers?	X			☐ Sa Improper container	
. Did you check for residual chlorine, if necessary?			X	☐ 9a Could not be determined due to matrix interference	
0. Were samples received within holding time?	X			☐ 10a Holding time expired	
1. For rad samples, was sample activity info. provided?			X	☐ Incomplete information	
2. For 1613B water samples is pH<9?			X	If no, was pH adjusted to pH 7 - 9 with sulfuric acid?	
3. Are the shipping containers intact?	X			☐ 13a Leaking ☐ 13b Other:	
4. Was COC relinquished? (Signed/Dated/Timed)	X			☐ 14a Not relinquished	
5. Are tests/parameters listed for each sample?	X		L I	☐ 15a Incomplete information	
5. Is the matrix of the samples noted?	X		(13)	☐ 15a Incomplete information	
7. Is the date/time of sample collection noted?	X		7.31	☐ 15a Incomplete information	
8. Is the client and project name/# identified?	X	-		☐ 15a Incomplete information	
9. Was the sampler identified on the COC?	X		-		

Sample Receiving Associate: R. Han Hannar k

Date: 5/6/11

QA026R22.doc, 012811

Test America - Knoxville ---- Air Canister Dilution Log Lot Number: <u>H1E060641</u>

	Initial Can Pressure					0.00	Subsequent Dilutions											
Analyst/Date	Tedlar Bag Time	Pbarr (in)	Sample ID	Can#	Pres. upon receipt (-in or + psig)	in or +	Analyst/Date	1 / S	Pbarr (in)	Initial Pres. Pi (in)	Final Pres. Pf (psig)	First InCan Final Pres. Pf (psig)	Second In-can Final Pres. Pf (psig)	Final Pres.	Serial Dilution Can#	Vol (mL)	Final Pres. Pf (psig)	Comments
510·11	AU	28.84	MH3LH	7472	-1.4													9204
6	1	4	MH3LN	6669	-0.8								£					9203



Appendix H Listing of Residences in Expanded Study Area

Appendix H Residences in Expanded Study Area Vapor Intrusion Characterization Report Former Chamberlain Manufacturing Facility

East Side of Street	
436 Boston Avenue	
432 Boston Avenue	
424 Boston Avenue	
420 Boston Avenue	
416 Boston Avenue	
410 Boston Avenue	
406 Boston Avenue	
400 Boston Avenue	
Boston Avenue - Esther Stree	et to Hanover Street
West Side of Street	
327 Boston Avenue	
321 Boston Avenue	
317 Boston Avenue	
311 Boston Avenue	
307 Boston Avenue	
301 Boston Avenue	